

# SERVICE MANUAL

# P780



P780  
*Equator Model*  
*Japan Model*  
*N. Hemisphere Model*  
*S. Hemisphere Model*  
 Chassis No. L29K-A

## D99 CHASSIS

### SPECIFICATIONS

<b>Picture tube</b>	0.24-0.25 mm aperture grill pitch 17 inches measured diagonally 90-degree deflection	<b>Power Consumption</b>	Maximum 120W Minimum 95W
<b>Video image area</b>	(16" maximum viewing image) Approx. 326 X 243 mm (w/h) (12 <sup>7/8</sup> x 9 <sup>5/8</sup> inches)	<b>Deflection frequency</b>	Horizontal: 30 to 85 KHz Vertical: 48 to 120 Hz
<b>Resolution</b>	Horizontal: Max. 1280 dots Vertical: Max. 1024 lines	<b>AC input voltage / current</b>	100 to 120 V, 50/60 Hz, 1.7A 220 to 240V, 50/60Hz, 0.9A
<b>Standard image area</b>	Approx. 312 x 234 mm (w/h) (12 <sup>1/4</sup> x 9 <sup>1/4</sup> inches)	<b>Dimensions</b>	414 x 404 x 420mm (w/h/d) (16 <sup>1/4</sup> x 15 <sup>7/8</sup> x 16 <sup>1/2</sup> inches)
<b>Input signal</b>		<b>Mass</b>	Approx. 18.8 kg (41 lbs. 8 oz.)
<b>Video</b>	Analog RGB (75 ohms typical) 0.7 Vp-p, ±5%, Positive		
<b>Sync</b>	Separate HD/VD, TTL Polarity Free External Composite, TTL Polarity Free (2K ohms impedance)		

*Design and specifications are subject to change without notice.*

**COLOR MONITOR**  
**DELL**®

## POWER MANAGEMENT

The power saving mode complies with the VESA Display Power Management Signaling standard. Each state of power management shall be activated by the host computer terminating the appropriate sync signals. Blanking the video must precede termination of the sync signals. The elapsed time counter shall also be controlled by the host computer. Reactivation of the monitor shall be accomplished from the host computer by re-establishing the normal sync signal.

	Power consumption mode	Screen (video)	Horizontal sync signal	Vertical sync signal	Power consumption	Recovery time	⏻ indicator
1	Normal operation	active	yes	yes	≤ 120 W	--	Green
2	Standby (1st mode)	blank	no	yes	≤ 15 W	Approx. 3 sec.	Green and Orange Alternate
3	Suspend (2nd mode)	blank	yes	no	≤ 15 W	Approx. 3 sec.	Green and Orange Alternate
4	Active-off (3rd mode)	blank	no	no	≤ 3 W	Approx. 10 sec.	Orange
5	Power-off	--	--	--	0 W	--	Off

## SELF DIAGNOSIS FUNCTION

When a failure occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

	Status	Area of Failure	LED Indication
1	Failure 1	HV or +B	Amber (0.5 second)/Off (0.5 second)
2	Failure 2	H Stop or V Stop	Amber (1.5 second)/Off (0.5 second)
3	Failure 3	ABL	Amber (0.5 second)/Off (1.5 second)
4	Aging/Self Test		Amber(0.5 second)/Off (0.5 second)/ Green (0.5 second)/Off (0.5 second)

## TIMING SPECIFICATION

MODE	1	2	3	4	5	6	Primary Mode 7	8	9	10
Resolution (H x V) Dot Clock (MHz)	640 x 480 25.175	720 x 400 28.321	640 x 480 31.500	640 x 480 36.000	800 x 600 49.500	800 x 600 56.250	1024 x 768 78.750	1024 x 768 94.500	1280 x 1024 135.000	1600 x 1200 162.000
<b>HORIZONTAL</b>										
Hor. Freq. (kHz)	31.469	31.468	37.500	43.269	46.875	53.674	60.023	68.677	79.976	75.000
H-Total	31.778	31.779	26.667	23.111	21.333	18.631	16.660	14.561	12.504	13.333
H-Blanking	6.356	6.356	6.349	5.333	5.172	4.409	3.657	3.725	3.022	3.457
H-Front Porch	0.636	0.636	0.508	1.556	0.323	0.569	0.203	0.508	0.119	0.395
H-Sync.	3.813	3.178	2.032	1.556	1.616	1.138	1.219	1.016	1.067	1.185
H-Back Porch	1.907	2.542	3.810	2.222	3.232	2.702	2.235	2.201	1.837	1.877
H-Active (μsec)	25.422	25.423	20.317	17.778	16.162	14.222	13.003	10.836	9.481	9.877
<b>VERTICAL</b>										
Ver. Freq. (Hz)	59.940	70.084	75.000	85.008	75.000	85.061	75.029	84.997	75.025	60.000
V-Total	525	449	500	509	625	631	800	808	1066	1250
V-Blanking	45	49	20	29	25	31	32	40	42	50
V-Front Porch	10	13	1	1	1	1	1	1	1	1
V-Sync.	2	2	3	3	3	3	3	3	3	3
V-Back Porch	33	34	16	25	21	27	28	36	38	46
V-Active (lines)	480	400	480	480	600	600	768	768	1024	1200
<b>SYNC.</b>										
Int (G)	No	No	No	No	No	No	No	No	No	No
Ext (H/V)/Polarity	Yes +/-	Yes +/-	Yes +/-	Yes +/-	Yes +/-	Yes +/-	Yes +/-	Yes +/-	Yes +/-	Yes +/-
Ext (CS)/Polarity	No	No	No	No	No	No	No	No	No	No
Int/Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int

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## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.

### Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampere). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63Trd are examples of passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Figure A)

### WARNING!!

**NEVER TURN ON THE POWER IN A CONDITION IN WHICH THE DEGAUSS COIL HAS BEEN REMOVED.**

### SAFETY-RELATED COMPONENT WARNING!!

**COMPONENTS IDENTIFIED BY SHADING AND MARK  $\triangle$  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.**

### AVERTISSEMENT!!

**NE JAMAIS METTRE SOUS TENSION QUAND LA BOBINE DE DEMAGNETISATION EST ENLEVEE.**

### ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

**LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE  $\triangle$  SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT SUSPECTE.**

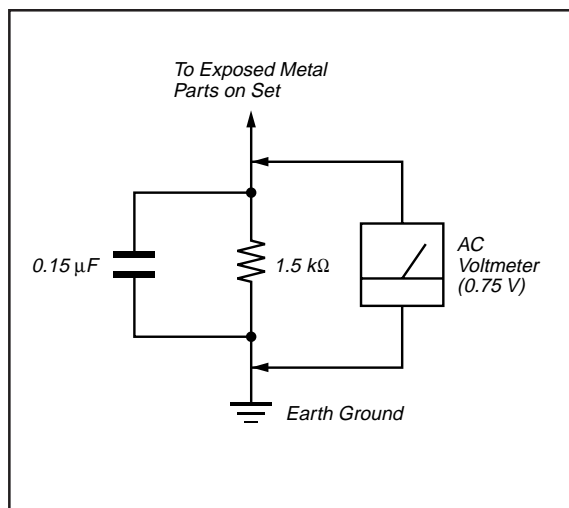


Figure A

# SECTION 1 GENERAL

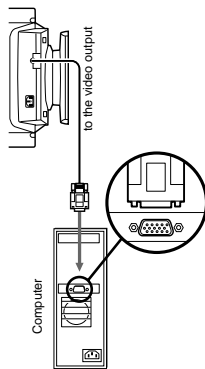
The following are partial abstracts from the Operating Instruction Manual. The page numbers shown reflect those of the Operating Instruction Manual.

## Getting Started

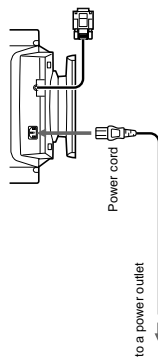
### Setup

Connect the monitor to your computer system.  
This monitor will sync to platforms running at horizontal frequencies between 30 and 85 kHz.

**Step 1** Make sure the computer system is switched off and attach the video signal cable to the video output of the computer.



**Step 2** Make sure the computer is switched off and attach the power cord to the monitor. Then, attach the other end of the power cord to a power outlet.

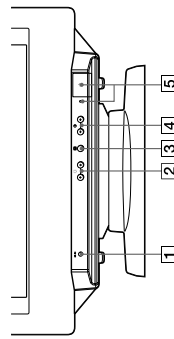


**Step 3** Switch on the monitor and computer.

**Step 4** Adjust the user controls according to your personal preference.  
Installation is complete.

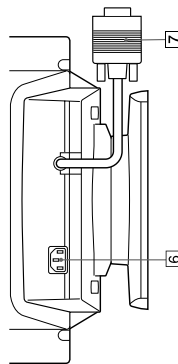
## Parts and Controls

### Front



- 1 **→← (RESET) button (pages 6, 9)**  
This button resets the adjustments to the factory settings.
- 2 **☉ (BRIGHTNESS) (↔) buttons (page 5)**  
These buttons adjust the picture brightness and function as the (↔) buttons when adjusting other items.
- 3 **(MENU) button (page 6)**  
This button displays the MENU OSD.
- 4 **☉ (CONTRAST) (↔) buttons (page 5)**  
These buttons adjust the contrast and function as the (↔) buttons when adjusting other items.

### Rear

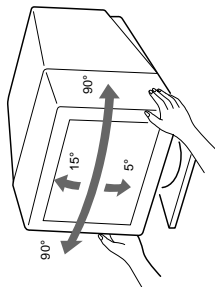


- 5 **(POWER) switch and indicator**  
This button turns the monitor on and off.  
The indicator lights up green when the monitor is on, and lights up green and orange when the monitor is in Power Saving mode.
- 6 **AC IN connector**  
This connector provides AC power to the monitor.
- 7 **Video input connector (HD15) (page 5)**  
This connector inputs RGB video signals and SYNC signals.

## Getting Started

### Use of the Tilt/Swivel

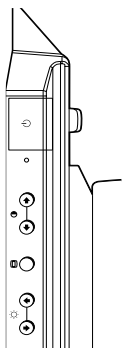
This monitor can be adjusted within the angles shown below. To turn the monitor vertically or horizontally, hold it at the bottom with both hands.



## Customizing Your Monitor

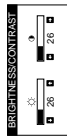
### Adjusting the Picture Brightness and Contrast

1 Press the **☉ (BRIGHTNESS) (↔) or ☉ (CONTRAST) (↔) buttons.**  
The BRIGHTNESS/CONTRAST OSD appears.



2 **To adjust the brightness.**  
Press the **☉ (BRIGHTNESS) (↔) buttons.**

**To adjust the contrast.**  
Press the **☉ (CONTRAST) (↔) buttons.**



### Video Connector



Pin No.	Signal	Pin No.	Signal
1	Red video	8	Blue return
2	Green video	9	Not used (no pin)
3	Blue video	10	Ground
4	Ground	11	Ground
5	CPU host ground	12	SDA (serial data)
6	Red ground	13	Horizontal Sync
7	Green return	14	Vertical Sync
		15	SCL (serial clock)

## The OSD (On-screen Display) System

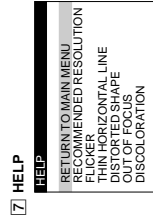
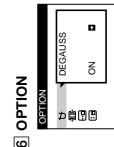
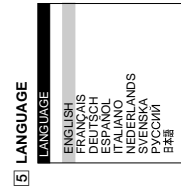
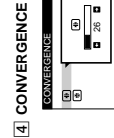
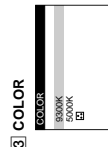
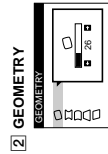
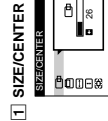
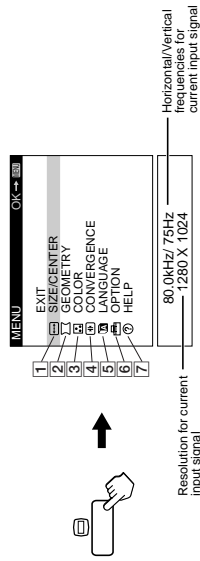
### Introducing the OSD System

You can adjust most of the monitor's settings using the OSDs (On-screen Display). All of the OSDs in this illustration are described on the following pages in order. You can access any of these OSDs from the MENU OSD. To adjust monitor settings using the OSDs, follow the steps below:

- Basic controls:**
- Use the **⏏** (MENU) button to display the MENU OSD and to select menu items.
  - Use the **⬅** (BRIGHTNESS) **↔** buttons to highlight menu items and to adjust settings.

### To adjust the monitor settings:

- 1 Press the MENU button to display the MENU OSD.
- 2 Highlight the desired OSD using the BRIGHTNESS buttons and press the MENU button again.



### Adjusting the Settings

#### 1 Adjusting the size and centering of the picture (SIZE/CENTER)

This setting is stored in memory for the current input signal.

- 1 Press the **⏏** button. The main MENU appears on the screen.
- 2 Press the **⬅** buttons to highlight **SIZE/CENTER** and press the **⏏** button again. The SIZE/CENTER menu appears on the screen.
- 3 Press the **⬅** buttons to select the desired adjustment item. Then press the **↔** buttons to adjust the setting. The OSD automatically disappears after about 30 seconds. To close the OSD, press the MENU button again.

Select	To
<b>⏏</b> HORIZONTAL CENTERING	shift the picture to the left or right
<b>⏏</b> VERTICAL CENTERING	shift the picture up or down
<b>⏏</b> HORIZONTAL SIZING	enlarge or reduce the picture width
<b>⏏</b> VERTICAL SIZING	enlarge or reduce the picture height
<b>⏏</b> ZOOM	enlarge or reduce the picture width and height proportionally

**Note**  
Adjustment stops when either the horizontal or vertical size reaches its maximum or minimum value.

#### 2 Adjusting the shape of the picture (GEOMETRY)

The GEOMETRY settings allow you to adjust the rotation and shape of the picture. The rotation setting is stored in memory for all input signals. All other settings are stored in memory for the current input signal.

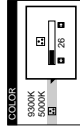
- 1 Press the **⏏** button. The main MENU appears on the screen.
- 2 Press the **⬅** buttons to highlight **GEOMETRY** and press the **⏏** button again. The GEOMETRY menu appears on the screen.
- 3 First press the **⬅** buttons to select the desired adjustment item. Then press the **↔** buttons to adjust the setting. The OSD automatically disappears after about 30 seconds. To close the OSD, press the MENU button again.

Select	To
<b>⏏</b> ROTATION	rotate the picture
<b>⏏</b> PINCUSHION	expand or contract the picture sides
<b>⏏</b> PIN BALANCE	shift the picture sides to the left or right
<b>⏏</b> KEYSTONE	adjust the picture width at the top of the screen
<b>⏏</b> KEY BALANCE	shift the picture to the left or right at the top of the screen

#### 3 Adjusting the color of the picture (COLOR)

The COLOR settings allow you to adjust the picture's color temperature by changing the color level of the white color field. Colors appear reddish if the temperature is low, and bluish if the temperature is high. This adjustment is useful for matching the monitor's colors to a printed picture's colors. This setting is stored in memory for all input signals.

- 1 Press the **⏏** button. The main MENU appears on the screen.
- 2 Press the **⬅** buttons to highlight **COLOR** and press the **⏏** button again. The COLOR menu appears on the screen.
- 3 Press the **⬅** buttons to select a color temperature. The preset color temperatures are 9300K and 5000K. Since the default setting is 9300K, the whites change from a bluish hue to a reddish hue as the temperature is lowered to 5000K. You can also fine tune the color temperature by selecting **⏏** in step 2 above, and using the **↔** buttons to adjust the color temperature manually.



This OSD allows you to adjust the color temperature between 9300K and 5000K. Press the **⬅** buttons to adjust the color temperature. The OSD automatically disappears after about 30 seconds. To close the OSD, press the MENU button again.

**Customizing Your Monitor**

**4 Adjusting the quality of the picture (CONVERGENCE)**

The CONVERGENCE settings allow you to adjust the quality of the picture by eliminating red or blue shadows around letters, characters and lines. Both settings are stored in memory for all input signals.

- 1 Press the **MENU** button.  
The main MENU appears on the screen.
- 2 Press the **↔** buttons to highlight **CONVERGENCE** and press the **MENU** button again.  
The CONVERGENCE menu appears on the screen.
- 3 Press the **↔** buttons to adjust the horizontal convergence, or the **↕** buttons to adjust the vertical convergence.  
The OSD automatically disappears after about 30 seconds. To close the OSD, press the MENU button again.

**5 Changing the OSD language (LANGUAGE)**

This setting is stored in memory for the current input signal.

- 1 Press the **MENU** button.  
The main MENU appears on the screen.
- 2 Press the **↔** buttons to highlight **LANGUAGE** and press the **MENU** button again.  
The LANGUAGE menu appears on the screen.
- 3 Press the **↔** buttons to select the language you prefer.  
The OSD automatically disappears after about 30 seconds. To close the OSD, press the MENU button again.

**6 Additional settings (OPTION)**

You can manually degauss (demagnetize) the screen, cancel the moire, adjust the OSD horizontal position, adjust the OSD vertical position and lock the controls using the OPTION OSD.

- 1 Press the **MENU** button.  
The main MENU appears on the screen.
- 2 Press the **↔** buttons to highlight **OPTION** and press the **MENU** button again.  
The OPTION menu appears on the screen.
- 3 Press the **↔** buttons to highlight the desired adjustment item.  
Adjust the selected item according to the following instructions. The OSD automatically disappears after about 30 seconds. To close the OSD, press the MENU button again.

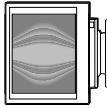
**Degaussing the monitor**  
The monitor is automatically degaussed (demagnetized) when the power is turned on.

To manually degauss the monitor, first press the **↔** buttons to highlight **(MANUAL DEGAUSS)**. Then press only the right **→** button.  
The monitor is degaussed for about three seconds. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result.

**Adjusting the amount of the moire cancellation**  
To adjust the amount of moire cancellation, first press the **↔** buttons to highlight **(MOIRE CANCEL)**. Then press the **↔** buttons to adjust the amount of moire cancellation until the moire effect is at a minimum.

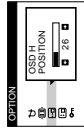
\* Moire is a type of natural interference which produces soft, wavy lines on your screen. It may appear due to interference between the pattern of the picture on the screen and the phosphor pitch pattern of the monitor.

Example of moire



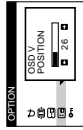
**Adjusting the OSD Horizontal Position**

To change the horizontal position of the OSD, first press the **↔** buttons to highlight **OSD H POSITION**. Then press the **↔** buttons to adjust the horizontal position of the OSD.



**Adjusting the OSD Vertical Position**

To change the vertical position of the OSD, first press the **↕** buttons to highlight **OSD V POSITION**. Then press the **↕** buttons to adjust the vertical position of the OSD.



**Locking the controls**

To protect adjustment data by locking the controls, first press **↔** buttons to highlight **CONTROL LOCK**. Then press the **↔** buttons to toggle the **Control Lock** on or off.  
Only the **⏻** (power) switch and MENU button will operate.

**Customizing Your Monitor**

**Resetting the adjustments**

Navigate through the on-screen menus to select the adjustment item you want to reset, and press the **RESET** button before the OSD disappears.

**Resetting a specific adjustment**

Navigate through the on-screen menus to select the adjustment item you want to reset, and press the **RESET** button before the OSD disappears.

**Resetting all of the adjustments for the current input signal**

Press the **RESET** button when no OSD is displayed on the screen. Note that the following items are not reset by this method:

- on-screen menu language (page 8)
- on-screen menu position (page 8)

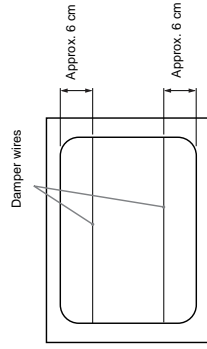
**Resetting all of the adjustment data to the factory presets**

Press and hold the reset button for more than two seconds. This resets everything to the factory presets including the input selection.

**Note**  
The **RESET** button does not function when **CONTROL LOCK** is set to ON.

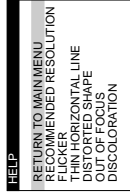
**If Thin Lines Appear on Your Screen (damper wires)**

The lines you may be seeing on your screen are normal for the Trinitron monitor and are not a malfunction. These are shadows from the damper wires that stabilize the aperture grille, and are most noticeable when the screen's background is light (usually white). The aperture grille is the essential element that makes a Trinitron picture tube unique by allowing more light to reach the screen, resulting in a brighter, more detailed picture.



**7 Using the HELP OSD**

- 1 Press the **MENU** button.  
The main MENU appears on the screen.
- 2 Press the **↔** buttons to highlight **HELP** and press the **MENU** button again.  
The HELP OSD appears on the screen.
- 3 Press the **↔** buttons to select an option from the HELP menu, then press the **MENU** button to view the HELP information.



**Monitor Information**

You can display the model name, serial number and year of manufacture using the **INFORMATION** OSD.

Press and hold the **MENU** button for 5 seconds.  
The **INFORMATION** OSD appears.



The **INFORMATION** OSD includes the model name, serial number and year of manufacture.

The OSD automatically disappears after about 30 seconds.



## Additional Information

### Warning Messages

If there is something wrong with the input signal, one of the following messages appears.

#### 1 Out of Scan Range

This message indicates that the current input signal is not appropriate for the monitor's specifications.

INFORMATION
MONITOR IS WORKING
OUT OF SCAN RANGE
CHANGE PC SETTING

#### 2 Power Save Mode

This message indicates that the monitor has reduced power consumption.

INFORMATION
MONITOR IS IN POWER SAVE MODE
ACTIVATE USING PC

#### 3 Check Signal Cable (self test pattern)

This message indicates that either no input signal is received, or the video cable is not connected.

INFORMATION
MONITOR IS WORKING
CHECK SIGNAL CABLE
WHITE
GREEN
BLUE

To solve these problems, see the "Troubleshooting" section below.

### Troubleshooting

If the problem is caused by the connected computer or other equipment, please refer to the connected equipment's instruction manual.

#### Symptom

##### No picture

If the ⏻ (power) indicator is not lit

- Check that the power cord is properly connected.
- Check that the ⏻ (power) switch is in the "on" position.

If the CHECK SIGNAL CABLE message appears on the screen, or if the ⏻ (power) indicator is either orange or alternating between green and orange

- Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets.
- Check that the HD15 video input cable's pins are not bent or pushed in.
- **Problems caused by the connected computer or other equipment**
- The computer is in power saving mode. Try pressing any key on the computer keyboard.
- Check that the computer's power is "on."
- Check that the graphic video board is completely seated in the proper bus slot.

##### If the OUT OF SCAN RANGE message appears on the screen

- **Problems caused by the connected computer or other equipment**
- Check that the video frequency range is within that specified for the monitor. If you replaced an old monitor with this monitor, reconnect the old monitor and adjust the frequency range to the following:  
Horizontal: 30 – 85 kHz  
Vertical: 48 – 120 Hz

##### Picture flickers, bounces, oscillates, or is scrambled

- Isolate and eliminate any potential sources of electric or magnetic fields such as other monitors, laser printers, electric fans, fluorescent lighting and televisions.
- Move the monitor away from power lines or place a magnetic shield near the monitor.
- Try plugging the monitor into a different AC outlet, preferably on a different circuit.
- Try turning the monitor 90° to the left or right.
- **Problems caused by the connected computer or other equipment**
- Check your graphic video board manual for the proper monitor setting.
- Confirm that the graphics mode (VESA, VGA, etc.) and the frequency of the input signal are supported by this monitor (Appendix). Even if the frequency is within the proper range, some graphic video boards may have a sync pulse that is too narrow for the monitor to sync correctly.
- Adjust the computer's refresh rate (vertical frequency) to obtain the best possible picture.

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## Additional Information

#### Symptom

##### Check these items

- Adjust the brightness and contrast (page 5).
- Degauss the monitor\* (page 8).
- If CANCEL MOIRE is ON, the picture may become fuzzy. Decrease the moire cancellation effect (page 8) or set CANCEL MOIRE to OFF.
- Eliminate the use of video cable extensions and/or video switch boxes.
- Check that all plugs are firmly seated in their sockets.

**Picture is not centered or sized properly**

- Adjust the size (page 7) or centering (page 7). Note that some video modes do not fill the screen to the edges.

**Edges of the image are curved**

- Adjust the geometry (page 7).

**Wavy or elliptical pattern (moire) is visible**

- Cancel the moire (page 8).

##### Problems caused by the connected computer or other equipment

- Change your desktop pattern.

**Color is not uniform**

- Degauss the monitor\* (page 8). If you place equipment that generates a magnetic field, such as a speaker, near the monitor, or if you change the direction the monitor faces, color may lose uniformity.

**White does not look white**

- Adjust the color temperature (page 7).

**Letters and lines show red or blue shadows at the edges**

- Adjust the convergence (page 8).

**Monitor buttons do not operate**

- If the control lock is set to ON, set it to OFF (page 8).

**A hum is heard right after the power is turned on**

- This is the normal sound of the auto-degauss cycle. When the power is turned on, the monitor is automatically degaussed for 3 seconds.

\* If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result. A humming noise may be heard, but this is not a malfunction.

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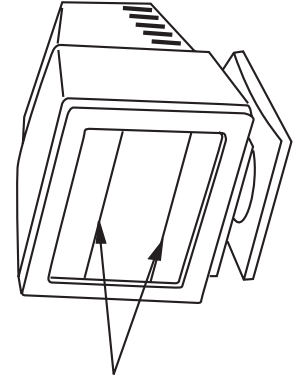
The following table contains general information about common monitor problems you might encounter.

COMMON SYMPTOMS	WHAT YOU SEE	POSSIBLE SOLUTIONS
No Video/LED off	No picture, monitor's dead.	<ul style="list-style-type: none"> <li>Check connection integrity</li> <li>Electric outlet verification</li> <li>Ensure power button depressed fully</li> </ul>
No Video/LED on	No picture or no brightness	<ul style="list-style-type: none"> <li>Increase brightness &amp; contrast controls</li> <li>Perform monitor self test feature check</li> <li>Check for bent or broken pins</li> </ul>
Poor Focus	Picture is fuzzy, blurry or ghosting	<ul style="list-style-type: none"> <li>Eliminate video extension cables</li> <li>Perform monitor reset</li> <li>Decrease brightness &amp; contrast controls</li> <li>Lower video resolution or increase font size</li> </ul>
Shaky/Jittery Video	Wavy picture or fine movement	<ul style="list-style-type: none"> <li>Perform monitor reset</li> <li>Check environmental factors</li> <li>Relocate and test in other room</li> </ul>
Color Purity Problems	Color is not uniform Has color blotches or shades	<ul style="list-style-type: none"> <li>Perform degauss</li> <li>Perform monitor reset</li> <li>Check environmental factors esp. woofers</li> </ul>
Color Convergence Problems	Characters show red or blue at edges	<ul style="list-style-type: none"> <li>Perform monitor reset</li> <li>Adjust the color convergence controls</li> </ul>
Missing Color or Color Flood	Entire screen is purple or yellow Entire screen is red, green or blue	<ul style="list-style-type: none"> <li>Perform monitor reset</li> <li>Perform monitor self test feature check</li> <li>Check for bent or broken pins</li> <li>Reseat the video card</li> </ul>
Missing Pixels	CRT screen has spots, specs or blemishes on the glass	<ul style="list-style-type: none"> <li>If the blemish is on the outside of the glass, try cleaning the CRT screen</li> </ul>
Brightness Problems	Picture too dim or too bright	<ul style="list-style-type: none"> <li>Perform monitor reset</li> <li>Adjust brightness &amp; contrast controls</li> </ul>

Geometric Distortion	Screen not sized or centered correctly	<ul style="list-style-type: none"> <li>Perform monitor reset</li> <li>Ensure monitor is in proper video mode</li> <li>Adjust the appropriate geometric control</li> </ul>
Moiré (Thin Curvy Lines)	Screen has wavy or elliptical lines Screen has wood grain patterns	<ul style="list-style-type: none"> <li>Ensure monitor is in proper video mode</li> <li>Adjust size first then the moiré controls</li> </ul>
Horizontal/Vertical Lines	Screen has one or more lines	<ul style="list-style-type: none"> <li>Perform monitor self test feature check</li> <li>Check for bent or broken pins</li> <li>Horizontal lines could be damper wires</li> </ul>
Sync Problems	Screen is scrambled or appears torn	<ul style="list-style-type: none"> <li>Perform monitor self test feature check</li> <li>Check for bent or broken pins</li> <li>Boot up in the "safe mode"</li> </ul>
Audible Noise Problems	Has humming sound or high frequency squeal	<ul style="list-style-type: none"> <li>Ensure monitor is in proper video mode</li> <li>Reposition the monitor</li> <li>Loud hum when turning on is normal</li> </ul>
CRT Scratched	Screen has scratches or smudges	<ul style="list-style-type: none"> <li>Turn monitor off and clean the screen</li> </ul>
Safety Related Issues	Visible signs of smoke or sparks	<ul style="list-style-type: none"> <li>Do not perform any troubleshooting steps</li> <li>Monitor needs to be replaced</li> </ul>
Intermittent Problems	Monitor malfunctions on & off	<ul style="list-style-type: none"> <li>Ensure monitor is in proper video mode</li> <li>Perform monitor reset</li> <li>Perform monitor self test feature check</li> </ul>

**PRODUCT SPECIFIC SYMPTOMS**

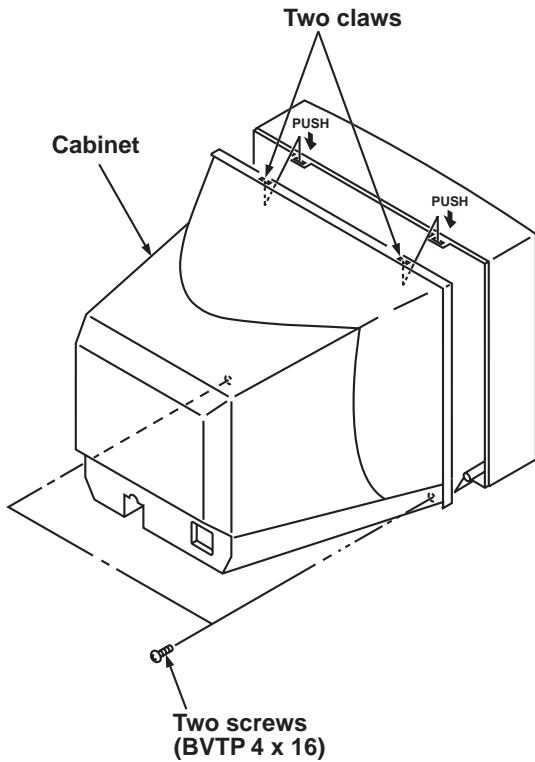
SPECIFIC SYMPTOMS	WHAT YOU SEE	POSSIBLE SOLUTIONS
Two fine lines on the screen.	Two fine horizontal lines (wires) are visible.	These damper wires stabilize the vertically striped aperture grille. This aperture grille allows more light to pass through to the screen giving the Trinitron CRT more color and brightness



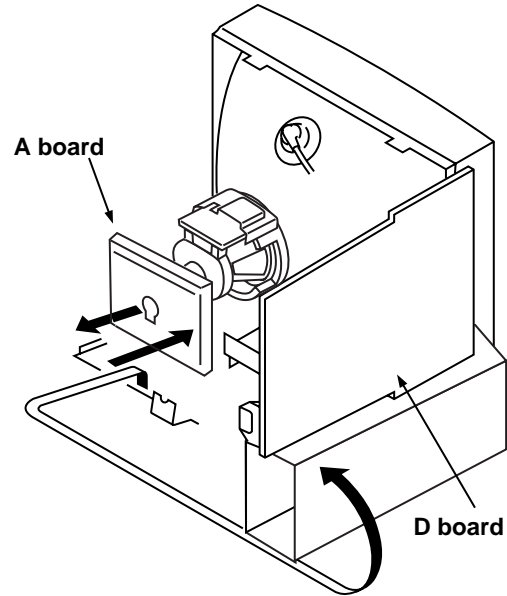
Damper Wires

## SECTION 2 DISASSEMBLY

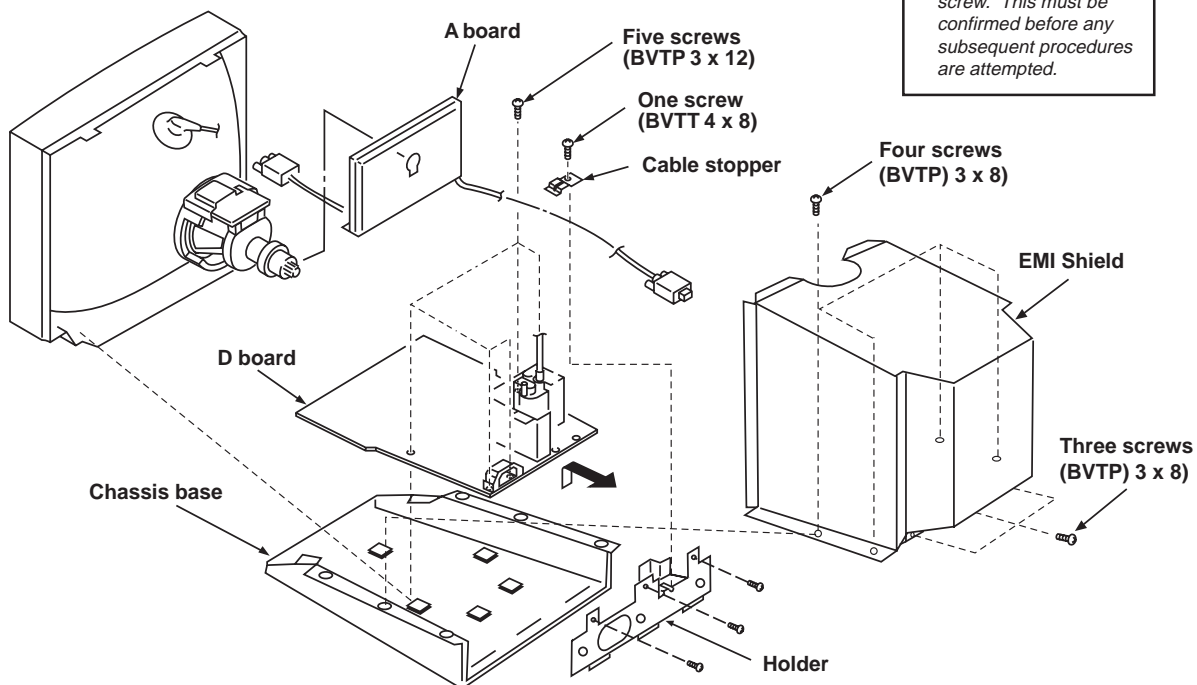
### 2-1. CABINET REMOVAL



### 2-2. SERVICE POSITION



### 2-3. A and D BOARD REMOVAL



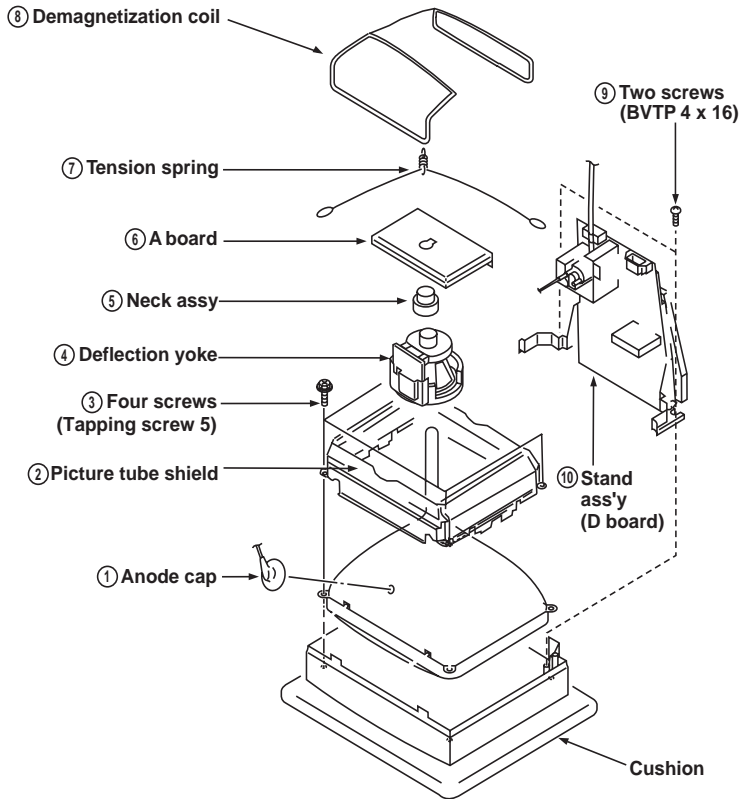
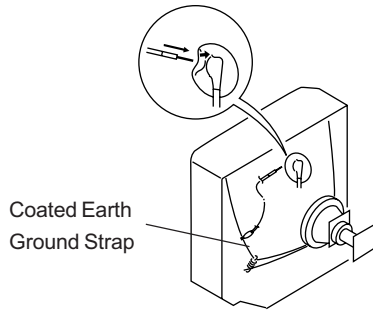
1 When the D-board is placed in service position, the Safety Earth Wire (green and yellow wire) is disconnected.

2 After service is completed and the D-board reinstalled, the Safety Earth Wire must be reattached to the chassis with the proper screw. This must be confirmed before any subsequent procedures are attempted.

## 2-4. PICTURE TUBE REMOVAL

**WARNING:  
BEFORE REMOVING  
THE ANODE CAP**

High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT *before* attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.

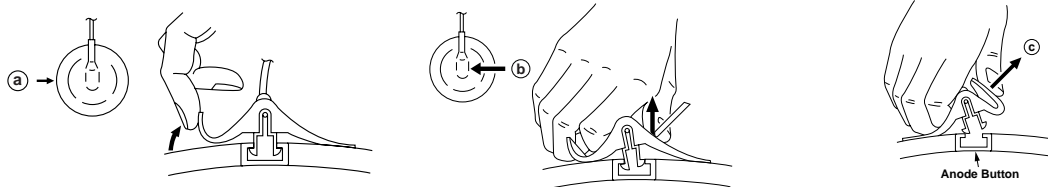


### ANODE CAP REMOVAL

**WARNING:** High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT *before* attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.

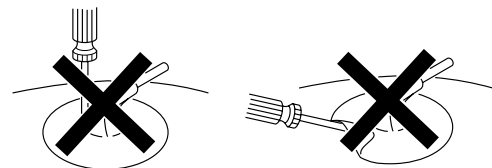
**NOTE:** After removing the anode, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield, or carbon painted on the CRT.

### REMOVAL PROCEDURES



### HOW TO HANDLE AN ANODE-CAP

- ① Do not use sharp objects which may cause damage to the surface of the anode cap.
- ② Do not squeeze the rubber covering too hard to avoid damaging the anode cap. A material fitting called a shatter-hook terminal is built into the rubber.
- ③ Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



## SECTION 3 SAFETY RELATED ADJUSTMENTS

When replacing parts shown in the table below, the following operational checks must be performed as a safety precaution against X-ray emissions from the unit.

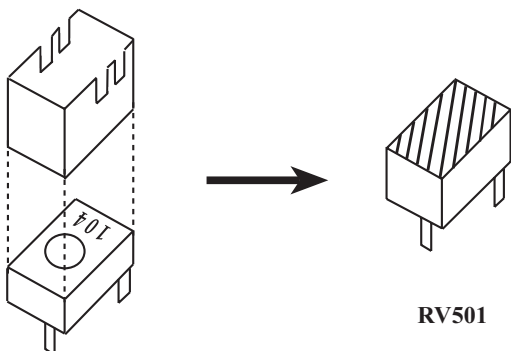
	Part Replaced ( <input checked="" type="checkbox"/> )
HV ADJ	RV501

	Part Replaced ( <input checked="" type="checkbox"/> )
HV Regulator Circuit	D board T501, IC501, RV501, R540, R541, R542, R544, R564, R567, R568, C532, C534, C539, C553, C554, C555, C556, C558, C561
HV HOLD DOWN Circuit	D board T501, R510, R543, R547, R549, R552, R595, D515, D517, C540, C542, C544, IC607, IC901
Beam Current Protector Circuit	D board T501, R545, R546, R548, R550, R596, R934, C535, C541, IC605, IC607, IC901

\* Allow the unit to warm up for one minute prior to checking the following conditions:

### a) HV Regulator Check

- 1) Input white cross hatch signal. (fH = 80 kHz)
- 2) CONT maximum and BRT center
- 3) Cut off Screen VR (G2).
- 4) Input voltage:  $120 \pm 2$  VAC
- 5) Confirm that the voltage is within the voltage range shown below.  
Standard voltage:  $26.9 \text{ KV} \pm 0.4 \text{ KV}$
- 6) When replacing components identified by  , make sure to recheck the High Voltage.



- 7) Verify the High Voltage as shown above ( $26.9 \text{ KV} \pm 0.4 \text{ KV}$ ) is within specification. If not, set H. SIZE data at minimum (-127) and then adjust RV501 on "D" Board.
- 8) After adjusting the High Voltage within specification, put the RV cover on RV501 as shown below and apply sufficient amount of RTV around RV501.

### b) HV Protector Circuit Check

- 1) Confirm that the voltage between cathode of D517 and GND is more than 27.5 VDC.
- 2) Using an external DC Power supply, apply the voltage shown below between cathode of D517 on "D" and GND, and confirm that the HV Hold-Down circuit works. (Raster disappears) Apply DC Voltage: Less than 35.5 VDC

#### Check Condition

- Input voltage :  $120 \pm 2$  VAC
- Input signal : (fH = 80 kHz), White Cross Hatch
- Controls : CONT (max) & BRT (center)
- B+ Voltage :  $180 \pm 3.0$  VDC

### c) Beam Protector Check (Software logic)

- 1) Using an external current source, apply  $< 1.55 \text{ mA}$  between pin (11) of FBT (T501) and GND, and confirm that the raster fades out.

#### Check Condition

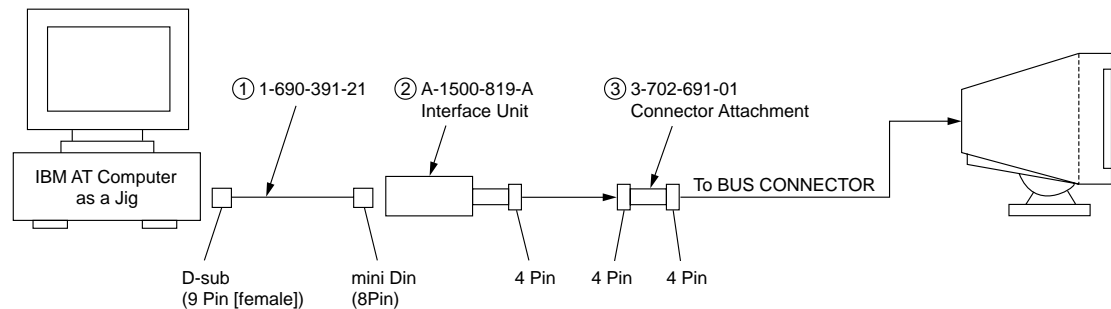
- Input voltage :  $120 \pm 2$  VAC
- Input signal : (fH = 80 kHz), White Cross Hatch
- Controls : CONT (max) & BRT (min)

### d) B+ Voltage Check

- 1) Input white cross hatch (fH = 80 kHz) signal.
- 2) CONT (max) & BRT (center)
- 3) Input voltage:  $120 \pm 2$  VAC  
**Note:** Use NF power supply or make sure that distortion factor is 3% or less.
- 4) Confirm that the voltage is within the voltage range shown below.  
Standard voltage:  $180 \pm 3.0$  VDC

## SECTION 4 ADJUSTMENTS

Connect the communication cable of the connector located on the D board on the monitor. Run the service software and then follow the instructions.



\* The parts above (①-③) are necessary for DAS adjustment.

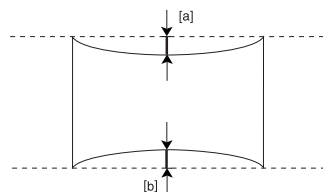
\* Allow a 30 minute warm-up period prior to making the following adjustments:

### 4-1. Landing Rough Adjustment

1. Display the all white pattern.
2. Adjust the contrast to maximum value.
3. Display the plain green pattern.
4. Slide the DY back and roughly adjust the plain green pattern with the purity magnet so that it is centered on the screen.
5. Moving the DY forward, adjust so that an entire screen becomes pure green.
6. Adjust the tilt of DY and tighten lightly with a clamp.

### 4-2. Landing Fine Adjustment

1. Place the monitor in the Helmholtz coil.
2. Set TLH plate to zero position.
3. Display plain green pattern.
4. Degauss CRT face and iron parts with degauss equipment or hand-degausser.
5. Perform auto degauss.
6. Attach a wobbling coil to the specified position of CRT neck.
7. Put the sensor of landing checker to CRT face.
8. Adjust purity, DY position and DY tilt.
9. Tighten DY screw.
10. Perform auto degauss.
11. Adjust top and bottom pin by pitching DY up and down with two wedges so that [a] is equal to [b].

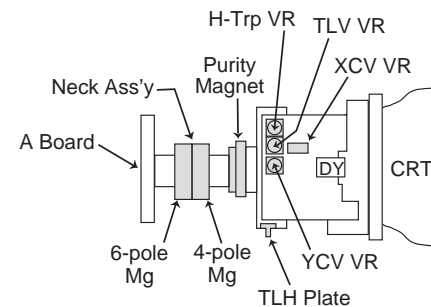


12. If the corner landing is out of specification, use a disk magnet for the landing correction.
13. If disk magnets were used, perform an auto degauss.
14. Remove the wobbling coil and sensor.
15. Fix the purity magnet on DY with white paint.

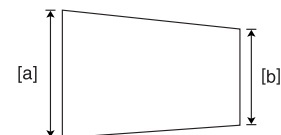
### 4-3. Convergence Rough Adjustment

1. Enter the white crosshatch signal.
2. Roughly adjust the horizontal (H.STAT) and vertical (V.STAT) convergence at four-pole magnet.
3. Roughly adjust HMC and VMC at six-pole magnet.

### 4-4. Convergence and V. Key (H. Trp) Fine Adjustment



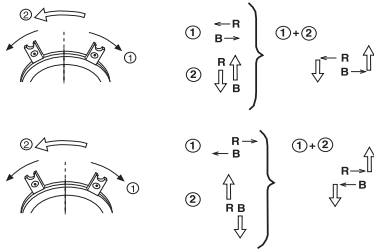
1. Display crosshatch pattern with green lines and black field.
2. Adjust V. Key (=H. Trapezoid) with H-Trp VR so that [a] is equal to [b].



3. Change "CONV\_OFF\_NDX" to "7".

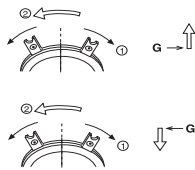
- Display crosshatch pattern with red and blue lines and black field.
- Adjust H.STAT and V.STAT with 4 pole magnet. Use 4 pole magnet, not "HSTAT" and "VSTAT".

**4 Pole Magnet**



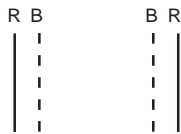
- Display crosshatch pattern with white lines and black field.
- Adjust HMC and VMC with 6 pole magnet.

**6 Pole Magnet**



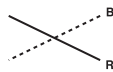
- Display crosshatch pattern with red and blue lines and black field.
- If necessary, repeat steps 5-8.
- Change "CONV\_OFF\_NDX" to "3".
- Adjust H.TILT with TLH plate.

**TLH movement**



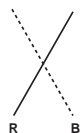
- Adjust XCV with XCV VR.

**XCV movement**



- Adjust YCH with YCH VR.

**YCH movement**



- Adjust V.TILT with TLV VR.

**TLV movement**

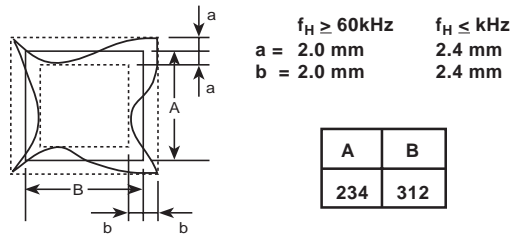


- If necessary, repeat steps 3-14 to make the optimum condition for the entire screen.
- Fix 4-pole magnet, 6-pole magnet and XCV VR with white paint

**Zero Position NECK Ass'y**

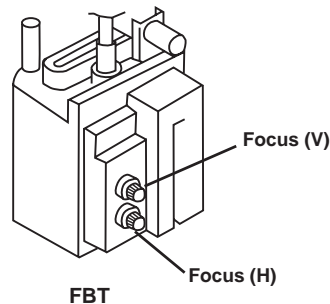


**4-5. Vertical and Horizontal Position and Size Specification**



**4-6. Focus adjustment**

Adjust focus (V) and focus (H) for optimum focus.

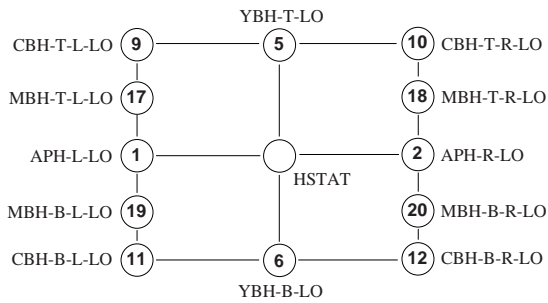


### 4-7. Digital Convergence Adjustment

#### Convergence (Low) Mode

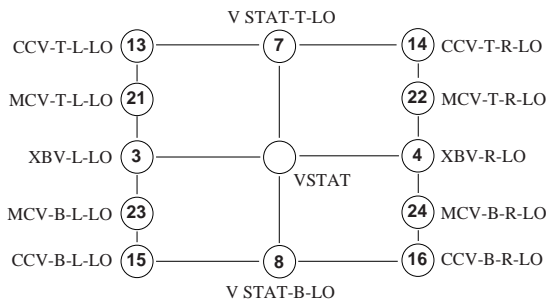
1. Adjust the H.STAT and V.STAT with "HSTAT" and "VSTAT".

#### A. Horizontal Convergence



Adjust each misconvergence point in sequence.

#### B. Vertical Convergence



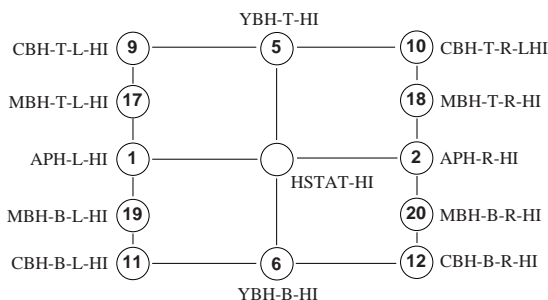
Adjust each misconvergence point in sequence.

2. Repeat the procedure of A and B so that the convergence of the entire screen is within the specification.

#### Convergence (High) Mode

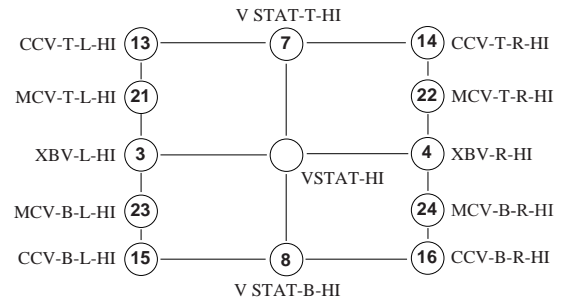
1. Adjust the H.STAT and V.STAT with "HSTAT-HI" and "VSTAT-HI".

#### A. Horizontal Convergence



Adjust each misconvergence point in sequence.

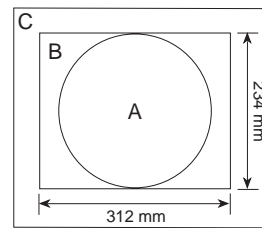
#### B. Vertical Convergence



Adjust each misconvergence point in sequence.

2. Repeat the procedure of A and B so that the convergence of the entire screen is within the specification.

### 4-8. Convergence Specification



<b>A Zone:</b>		<u>Others</u>
Primary Mode	H: ≤ 0.25mm	H: ≤ 0.3mm
	V: ≤ 0.2mm	V: ≤ 0.3mm
<b>B Zone:</b>		<u>Others</u>
Primary Mode	H: ≤ 0.3mm	H: ≤ 0.4mm
	V: ≤ 0.3mm	V: ≤ 0.4mm
<b>C Zone:</b>		<u>Others</u>
Primary Mode	H: ≤ 0.35mm	H: ≤ 0.4mm
	V: ≤ 0.35mm	V: ≤ 0.4mm









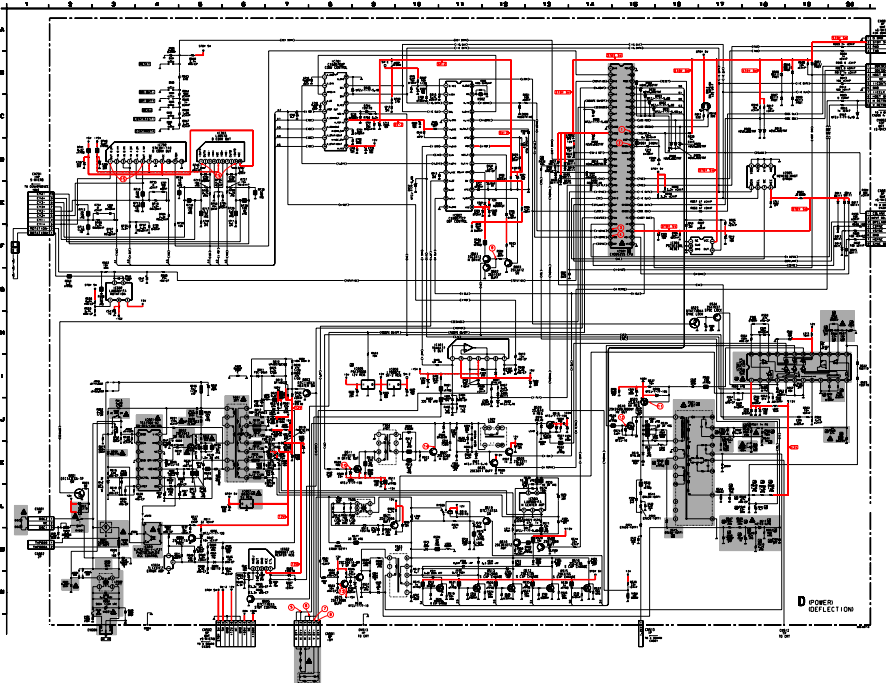




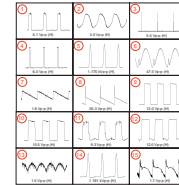


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D BOARD SCHEMATIC DIAGRAM



D BOARD WAVEFORMS



D BOARD VOLTAGE LIST

NO.	TEST POINT	VOLTAGE	UNIT
1	TP1	5.0	V
2	TP2	5.0	V
3	TP3	5.0	V
4	TP4	5.0	V
5	TP5	5.0	V
6	TP6	5.0	V
7	TP7	5.0	V
8	TP8	5.0	V
9	TP9	5.0	V
10	TP10	5.0	V
11	TP11	5.0	V
12	TP12	5.0	V
13	TP13	5.0	V
14	TP14	5.0	V
15	TP15	5.0	V
16	TP16	5.0	V
17	TP17	5.0	V
18	TP18	5.0	V
19	TP19	5.0	V
20	TP20	5.0	V
21	TP21	5.0	V
22	TP22	5.0	V
23	TP23	5.0	V
24	TP24	5.0	V
25	TP25	5.0	V
26	TP26	5.0	V
27	TP27	5.0	V
28	TP28	5.0	V
29	TP29	5.0	V
30	TP30	5.0	V
31	TP31	5.0	V
32	TP32	5.0	V
33	TP33	5.0	V
34	TP34	5.0	V
35	TP35	5.0	V
36	TP36	5.0	V
37	TP37	5.0	V
38	TP38	5.0	V
39	TP39	5.0	V
40	TP40	5.0	V
41	TP41	5.0	V
42	TP42	5.0	V
43	TP43	5.0	V
44	TP44	5.0	V
45	TP45	5.0	V
46	TP46	5.0	V
47	TP47	5.0	V
48	TP48	5.0	V
49	TP49	5.0	V
50	TP50	5.0	V
51	TP51	5.0	V
52	TP52	5.0	V
53	TP53	5.0	V
54	TP54	5.0	V
55	TP55	5.0	V
56	TP56	5.0	V
57	TP57	5.0	V
58	TP58	5.0	V
59	TP59	5.0	V
60	TP60	5.0	V
61	TP61	5.0	V
62	TP62	5.0	V
63	TP63	5.0	V
64	TP64	5.0	V
65	TP65	5.0	V
66	TP66	5.0	V
67	TP67	5.0	V
68	TP68	5.0	V
69	TP69	5.0	V
70	TP70	5.0	V
71	TP71	5.0	V
72	TP72	5.0	V
73	TP73	5.0	V
74	TP74	5.0	V
75	TP75	5.0	V
76	TP76	5.0	V
77	TP77	5.0	V
78	TP78	5.0	V
79	TP79	5.0	V
80	TP80	5.0	V
81	TP81	5.0	V
82	TP82	5.0	V
83	TP83	5.0	V
84	TP84	5.0	V
85	TP85	5.0	V
86	TP86	5.0	V
87	TP87	5.0	V
88	TP88	5.0	V
89	TP89	5.0	V
90	TP90	5.0	V
91	TP91	5.0	V
92	TP92	5.0	V
93	TP93	5.0	V
94	TP94	5.0	V
95	TP95	5.0	V
96	TP96	5.0	V
97	TP97	5.0	V
98	TP98	5.0	V
99	TP99	5.0	V
100	TP100	5.0	V

D BOARD TRANSISTOR VOLTAGE LIST

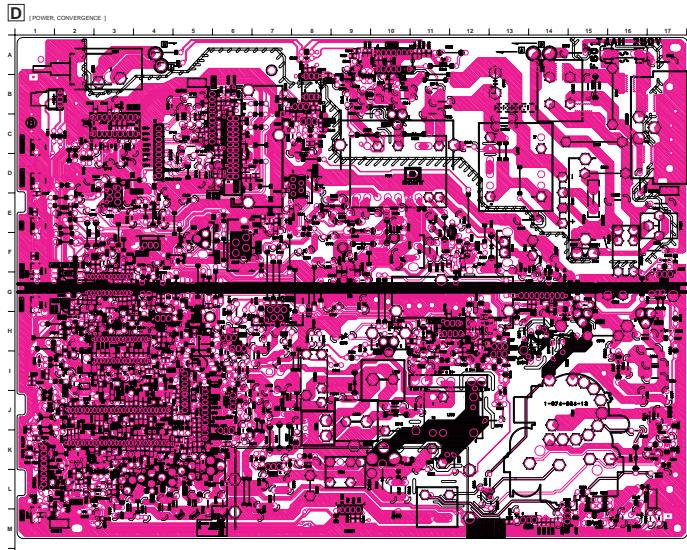
NO.	TEST POINT	VOLTAGE	UNIT
1	TP1	5.0	V
2	TP2	5.0	V
3	TP3	5.0	V
4	TP4	5.0	V
5	TP5	5.0	V
6	TP6	5.0	V
7	TP7	5.0	V
8	TP8	5.0	V
9	TP9	5.0	V
10	TP10	5.0	V
11	TP11	5.0	V
12	TP12	5.0	V
13	TP13	5.0	V
14	TP14	5.0	V
15	TP15	5.0	V
16	TP16	5.0	V
17	TP17	5.0	V
18	TP18	5.0	V
19	TP19	5.0	V
20	TP20	5.0	V
21	TP21	5.0	V
22	TP22	5.0	V
23	TP23	5.0	V
24	TP24	5.0	V
25	TP25	5.0	V
26	TP26	5.0	V
27	TP27	5.0	V
28	TP28	5.0	V
29	TP29	5.0	V
30	TP30	5.0	V
31	TP31	5.0	V
32	TP32	5.0	V
33	TP33	5.0	V
34	TP34	5.0	V
35	TP35	5.0	V
36	TP36	5.0	V
37	TP37	5.0	V
38	TP38	5.0	V
39	TP39	5.0	V
40	TP40	5.0	V
41	TP41	5.0	V
42	TP42	5.0	V
43	TP43	5.0	V
44	TP44	5.0	V
45	TP45	5.0	V
46	TP46	5.0	V
47	TP47	5.0	V
48	TP48	5.0	V
49	TP49	5.0	V
50	TP50	5.0	V
51	TP51	5.0	V
52	TP52	5.0	V
53	TP53	5.0	V
54	TP54	5.0	V
55	TP55	5.0	V
56	TP56	5.0	V
57	TP57	5.0	V
58	TP58	5.0	V
59	TP59	5.0	V
60	TP60	5.0	V
61	TP61	5.0	V
62	TP62	5.0	V
63	TP63	5.0	V
64	TP64	5.0	V
65	TP65	5.0	V
66	TP66	5.0	V
67	TP67	5.0	V
68	TP68	5.0	V
69	TP69	5.0	V
70	TP70	5.0	V
71	TP71	5.0	V
72	TP72	5.0	V
73	TP73	5.0	V
74	TP74	5.0	V
75	TP75	5.0	V
76	TP76	5.0	V
77	TP77	5.0	V
78	TP78	5.0	V
79	TP79	5.0	V
80	TP80	5.0	V
81	TP81	5.0	V
82	TP82	5.0	V
83	TP83	5.0	V
84	TP84	5.0	V
85	TP85	5.0	V
86	TP86	5.0	V
87	TP87	5.0	V
88	TP88	5.0	V
89	TP89	5.0	V
90	TP90	5.0	V
91	TP91	5.0	V
92	TP92	5.0	V
93	TP93	5.0	V
94	TP94	5.0	V
95	TP95	5.0	V
96	TP96	5.0	V
97	TP97	5.0	V
98	TP98	5.0	V
99	TP99	5.0	V
100	TP100	5.0	V

D BOARD TRANSISTOR VOLTAGE LIST

NO.	TEST POINT	VOLTAGE	UNIT
1	TP1	5.0	V
2	TP2	5.0	V
3	TP3	5.0	V
4	TP4	5.0	V
5	TP5	5.0	V
6	TP6	5.0	V
7	TP7	5.0	V
8	TP8	5.0	V
9	TP9	5.0	V
10	TP10	5.0	V
11	TP11	5.0	V
12	TP12	5.0	V
13	TP13	5.0	V
14	TP14	5.0	V
15	TP15	5.0	V
16	TP16	5.0	V
17	TP17	5.0	V
18	TP18	5.0	V
19	TP19	5.0	V
20	TP20	5.0	V
21	TP21	5.0	V
22	TP22	5.0	V
23	TP23	5.0	V
24	TP24	5.0	V
25	TP25	5.0	V
26	TP26	5.0	V
27	TP27	5.0	V
28	TP28	5.0	V
29	TP29	5.0	V
30	TP30	5.0	V
31	TP31	5.0	V
32	TP32	5.0	V
33	TP33	5.0	V
34	TP34	5.0	V
35	TP35	5.0	V
36	TP36	5.0	V
37	TP37	5.0	V
38	TP38	5.0	V
39	TP39	5.0	V
40	TP40	5.0	V
41	TP41	5.0	V
42	TP42	5.0	V
43	TP43	5.0	V
44	TP44	5.0	V
45	TP45	5.0	V
46	TP46	5.0	V
47	TP47	5.0	V
48	TP48	5.0	V
49	TP49	5.0	V
50	TP50	5.0	V
51	TP51	5.0	V
52	TP52	5.0	V
53	TP53	5.0	V
54	TP54	5.0	V
55	TP55	5.0	V
56	TP56	5.0	V
57	TP57	5.0	V
58	TP58	5.0	V
59	TP59	5.0	V
60	TP60	5.0	V
61	TP61	5.0	V
62	TP62	5.0	V
63	TP63	5.0	V
64	TP64	5.0	V
65	TP65	5.0	V
66	TP66	5.0	V
67	TP67	5.0	V
68	TP68	5.0	V
69	TP69	5.0	V
70	TP70	5.0	V
71	TP71	5.0	V
72	TP72	5.0	V
73	TP73	5.0	V
74	TP74	5.0	V
75	TP75	5.0	V
76	TP76	5.0	V
77	TP77	5.0	V
78	TP78	5.0	V
79	TP79	5.0	V
80	TP80	5.0	V
81	TP81	5.0	V
82	TP82	5.0	V
83	TP83	5.0	V
84	TP84	5.0	V
85	TP85	5.0	V
86	TP86	5.0	V
87	TP87	5.0	V
88	TP88	5.0	V
89	TP89	5.0	V
90	TP90	5.0	V
91	TP91	5.0	V
92	TP92	5.0	V
93	TP93	5.0	V
94	TP94	5.0	V
95	TP95	5.0	V
96	TP96	5.0	V
97	TP97	5.0	V
98	TP98	5.0	V
99	TP99	5.0	V
100	TP100	5.0	V



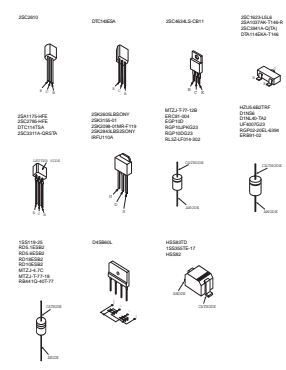
F70



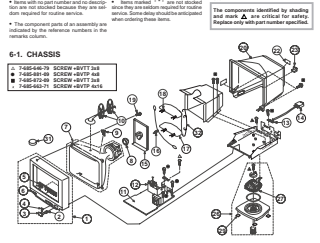
**D BOARD SEMICONDUCTOR LOCATION LIST**

REF. DESIGNATOR	DESCRIPTION	MANUFACTURER	PART NUMBER	REVISION	DATE	BY	CHKD
1	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
2	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
3	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
4	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
5	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
6	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
7	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
8	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
9	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
10	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
11	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
12	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
13	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
14	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
15	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
16	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
17	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
18	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
19	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
20	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
21	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
22	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
23	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
24	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
25	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
26	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
27	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
28	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
29	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
30	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
31	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
32	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
33	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
34	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
35	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
36	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
37	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
38	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
39	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
40	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
41	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
42	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
43	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
44	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
45	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
46	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
47	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
48	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
49	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
50	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
51	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
52	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
53	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
54	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
55	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
56	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
57	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
58	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
59	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
60	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
61	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
62	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
63	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
64	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
65	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
66	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
67	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
68	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
69	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
70	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
71	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
72	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
73	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
74	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
75	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
76	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
77	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
78	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
79	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
80	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
81	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
82	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
83	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
84	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
85	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
86	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
87	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
88	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
89	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
90	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
91	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
92	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
93	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
94	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
95	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
96	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
97	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
98	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
99	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...
100	RESISTOR	TECHNICAL	2500000000	1.0	01/01/00	...	...

**5-4. SEMICONDUCTORS**



**SECTION 5 EXPLODED VIEWS**

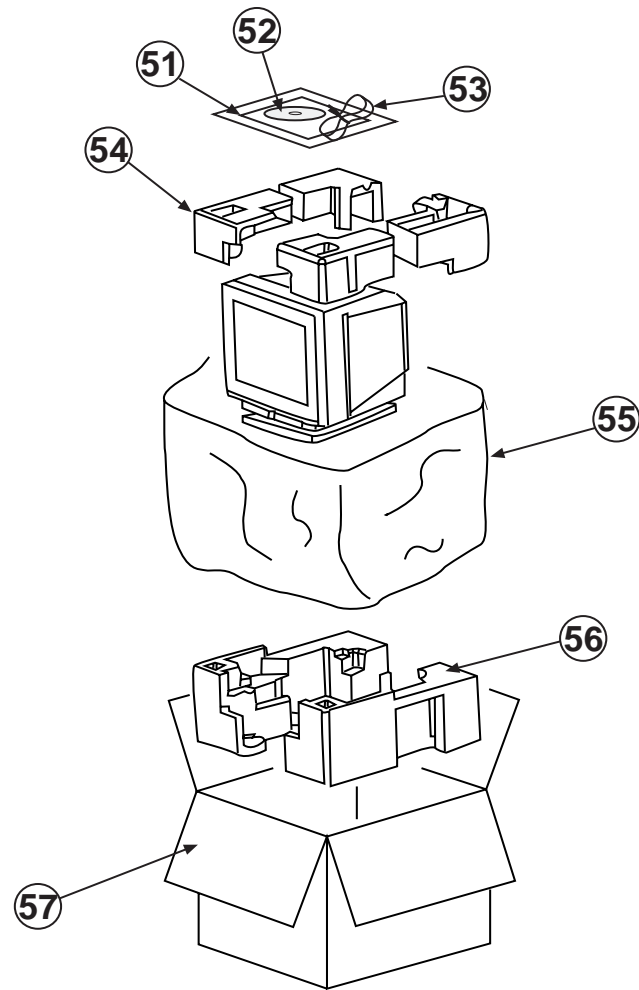


REF. PART NO.	DESCRIPTION	QTY	REF. PART NO.	DESCRIPTION	QTY
1	4-0278-01	WIRE, 4-027	16	4-0278-01	SPRING EXTENSION
2	4-0278-01	SPRING CONNECTION	17	4-0278-01	COIL SPRING
3	4-0278-01	BUTTON POWER	18	4-0278-01	HOLDER, SCALING COIL
4	4-0278-01	COIL, CO	19	4-0278-01	COIL, SPRING
5	4-0278-01	BUTTON, MULT	20	4-0278-01	CABINET
6	4-0278-01	BUTTON, RESET	21	4-0278-01	LABEL INFORMATION
7	4-0278-01	WIRE, 4-027	22	4-0278-01	COIL, COIL
8	4-0278-01	WIRE, 4-027	23	4-0278-01	SPRING ASSEMBLY
9	4-0278-01	SPRING, COIL	24	4-0278-01	BLANK
10	4-0278-01	HOLDER, IN CABLE	25	4-0278-01	COIL, COIL
11	4-0278-01	WIRE, 4-027	26	4-0278-01	WIRE, COIL
12	4-0278-01	WIRE, 4-027	27	4-0278-01	WIRE, COIL
13	4-0278-01	WIRE, 4-027	28	4-0278-01	WIRE, COIL
14	4-0278-01	WIRE, 4-027	29	4-0278-01	WIRE, COIL
15	4-0278-01	WIRE, 4-027	30	4-0278-01	WIRE, COIL

Schematic Diagram



## 6-2. PACKING MATERIALS



REF.NO.	PART NO.	DESCRIPTION	REMARK
51	* 3-867-224-11	MANUAL, INSTRUCTION	
52	* 3-867-225-11	MANUAL, CD-ROM	
53	△ 1-783-795-11	CORD SET, POWER (JAPAN ONLY)	
54	* 4-072-182-01	CUSHION ASSY, UPPER	
55	* 4-041-927-31	BAG, POLYETHYLENE	
56	* 4-072-185-01	CUSHION ASSY, LOWER	
57	* 4-072-189-01	CARTON, INDIVIDUAL	





## SECTION 7 ELECTRICAL PARTS LIST

**Note:**

The components identified by shading and mark **△** are critical for safety. Replace only with part number specified.

The components identified by **☒** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

**RESISTORS**

- All resistors are in ohms
- F : nonflammable

**Note:**

Les composants identifiés par un trame et une marque **△** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked with an asterisk " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>A</b>							
* <b>A-1294-798-A BOARD, COMPLETE</b>							
	4-382-854-11	SCREW (M3X10), P, SW (+)					
<b>CAPACITOR</b>							
C001	1-162-318-11	CERAMIC	0.001μF 10% 500V	C092	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
C002	1-106-220-00	MYLAR	0.1μF 10% 100V	C102	1-137-528-11	FILM	0.1μF 10% 250V
C004	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	C104	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
C007	1-104-664-11	ELECT	47μF 20% 25V	C105	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
C008	1-104-664-11	ELECT	47μF 20% 25V	C106	1-137-528-11	FILM	0.1μF 10% 250V
C009	1-126-925-11	ELECT	470μF 20% 10V	C112	1-163-233-11	CERAMIC CHIP	18pF 5% 50V
C010	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	C130	1-216-295-91	SHORT	
C011	1-106-220-00	MYLAR	0.1μF 10% 100V	C151	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
C012	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	C202	1-137-528-11	FILM	0.1μF 10% 250V
C014	1-107-932-11	ELECT	47μF 20% 100V	C204	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
C015	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	C205	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
C016	1-128-528-11	ELECT	470μF 20% 16V	C206	1-137-528-11	FILM	0.1μF 10% 250V
C017	1-104-664-11	ELECT	47μF 20% 25V	C212	1-163-229-11	CERAMIC CHIP	12pF 5% 50V
C018	1-107-961-91	ELECT	10μF 20% 250V	C230	1-216-295-91	SHORT	
C022	1-104-664-11	ELECT	47μF 20% 25V	C251	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
C027	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	C302	1-137-528-11	FILM	0.1μF 10% 250V
C028	1-104-664-11	ELECT	47μF 20% 25V	C304	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
C029	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	C305	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
C032	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	C306	1-137-528-11	FILM	0.1μF 10% 250V
C033	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	C312	1-163-233-11	CERAMIC CHIP	18pF 5% 50V
C035	1-162-134-11	CERAMIC	470pF 10% 2KV	C330	1-216-295-91	SHORT	
C036	1-104-503-12	CERAMIC CHIP	0.1μF 10% 100V	C351	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V
C042	1-163-009-11	CERAMIC CHIP	0.001μF 10% 50V	<b>CONNECTOR</b>			
C044	1-163-251-11	CERAMIC CHIP	100pF 5% 50V	CN301	1-506-108-41	PIN, CONNECTOR (TERMINAL PIN)	
C046	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	CN303	1-695-915-11	TAB (CONTACT)	
C047	1-104-664-11	ELECT	47μF 20% 25V	CN304	1-695-915-11	TAB (CONTACT)	
C049	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	CN305 *	1-564-512-11	PLUG, CONNECTOR 9P	
C050	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	CN306 *	1-564-509-11	PLUG, CONNECTOR 6P	
C053	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	CN309 *	1-564-511-11	PLUG, CONNECTOR 8P	
C054	1-137-528-11	FILM	0.1μF 10% 250V	CN310 *	1-779-944-21	PIN, CONNECTOR (PC BOARD) 4P	
C055	1-104-503-12	CERAMIC CHIP	0.1μF 10% 100V	CN311 *	1-564-508-11	PLUG, CONNECTOR 5P	
C061	1-164-004-11	CERAMIC CHIP	0.1μF 10% 25V	CN313 *	1-785-705-11	PIN, CONNECTOR (PC BOARD) 9P	
C090	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	<b>DIODE</b>			
				D001	8-719-970-02	DIODE 1SR139-400T31	
				D002	8-719-991-33	DIODE 1SS133T-77	
				D003	8-719-991-33	DIODE 1SS133T-77	
				D004	8-719-991-33	DIODE 1SS133T-77	
				D005	8-719-991-33	DIODE 1SS133T-77	



The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

Les composants identifiés par un triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



REF.NO.	PART NO.	DESCRIPTION	REMARK
R046	1-216-097-91	RES, CHIP	100K 5% 1/10W
R047	1-216-073-00	RES, CHIP	10K 5% 1/10W
R048	1-219-398-51	METAL	2.2M 5% 1W
R049	1-216-697-91	METAL CHIP	82K 0.50% 1/10W
R051	1-216-049-91	RES, CHIP	1K 5% 1/10W
R052	1-216-073-00	RES, CHIP	10K 5% 1/10W
R053	1-219-621-91	METAL	22M 10% 1/4W
R062	1-216-295-91	SHORT	
R064	1-202-830-00	SOLID	10K 20% 1/2W
R102	1-216-113-00	RES, CHIP	470K 5% 1/10W
R104	1-216-021-00	RES, CHIP	68 5% 1/10W
R106	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W
R107	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R108	1-216-679-11	METAL CHIP	15K 0.50% 1/10W
R109	1-216-113-00	RES, CHIP	470K 5% 1/10W
R111	1-249-409-11	CARBON	220 5% 1/4WF
R117	1-216-019-00	RES, CHIP	56 5% 1/10W
R118	1-216-009-91	RES, CHIP	22 5% 1/10W
R119	1-216-113-00	RES, CHIP	470K 5% 1/10W
R130	1-216-022-00	RES, CHIP	75 5% 1/10W
R151	1-202-549-00	SOLID	100 20% 1/2W
R161	1-215-394-00	METAL	75 1% 1/4W
R202	1-216-113-00	RES, CHIP	470K 5% 1/10W
R204	1-216-021-00	RES, CHIP	68 5% 1/10W
R206	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W
R207	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R208	1-216-679-11	METAL CHIP	15K 0.50% 1/10W
R209	1-216-113-00	RES, CHIP	470K 5% 1/10W
R211	1-249-409-11	CARBON	220 5% 1/4W F
R217	1-216-019-00	RES, CHIP	56 5% 1/10W
R218	1-216-009-91	RES, CHIP	22 5% 1/10W
R219	1-216-113-00	RES, CHIP	470K 5% 1/10W
R230	1-216-022-00	RES, CHIP	75 5% 1/10W
R251	1-202-549-00	SOLID	100 20% 1/2W
R261	1-215-394-00	METAL	75 1% 1/4W
R302	1-216-113-00	RES, CHIP	470K 5% 1/10W
R304	1-216-021-00	RES, CHIP	68 5% 1/10W
R306	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W
R307	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R308	1-216-679-11	METAL CHIP	15K 0.50% 1/10W
R309	1-216-113-00	RES, CHIP	470K 5% 1/10W
R311	1-249-409-11	CARBON	220 5% 1/4W F
R317	1-216-019-00	RES, CHIP	56 5% 1/10W
R318	1-216-009-91	RES, CHIP	22 5% 1/10W
R319	1-216-113-00	RES, CHIP	470K 5% 1/10W
R330	1-216-022-00	RES, CHIP	75 5% 1/10W
R351	1-202-549-00	SOLID	100 20% 1/2W
R361	1-215-394-00	METAL	75 1% 1/4W

**SPARK GAP**

SG001 $\triangle$	1-519-422-11	GAP, SPARK	
SG002 $\triangle$	1-517-499-21	GAP, SPARK	
SG101 $\triangle$	1-517-499-21	GAP, SPARK	
SG201 $\triangle$	1-517-499-21	GAP, SPARK	
SG301 $\triangle$	1-517-499-21	GAP, SPARK	

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>D</b>			
<b>A-1346-874-A D BOARD, COMPLETE</b>			
	1-533-223-11	CLIP, FUSE	
	3-710-578-01	COVER, VOLUME, 6 MOLD	
	4-071-071-01	HOLDER, LED	
	4-382-854-01	SCREW (M3X8), P, SW (+)	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
	4-382-854-21	SCREW (M3X14), P, SW (+)	
<b>CAPACITOR</b>			
C401	1-128-528-11	ELECT	470 $\mu$ F 20% 25V
C402	1-117-667-31	FILM	0.47 $\mu$ F 5% 250V
C403	1-107-911-11	ELECT	220 $\mu$ F 20% 50V
C404	1-128-528-11	ELECT	470 $\mu$ F 20% 25V
C405	1-104-760-11	CERAMIC CHIP	0.047 $\mu$ F 10% 50V
C406	1-137-368-11	FILM	0.0047 $\mu$ F 5% 50V
C407	1-137-372-11	FILM	0.022 $\mu$ F 5% 50V
C410	1-164-005-11	CERAMIC CHIP	0.47 $\mu$ F 25V
C501	1-126-964-11	ELECT	10 $\mu$ F 20% 50V
C502	1-137-370-11	FILM	0.01 $\mu$ F 5% 50V
C503	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C504	1-102-030-00	CERAMIC	330pF 10% 500V
C505	1-109-878-11	CERAMIC	15pF 5% 2KV
C506	1-126-960-11	ELECT	1 $\mu$ F 20% 50V
C507	1-131-653-11	FILM	0.19 $\mu$ F 5% 400V
C508	1-128-526-11	ELECT	100 $\mu$ F 20% 25V
C509	1-162-117-00	CERAMIC	100pF 10% 500V
C510	1-102-228-00	CERAMIC	470pF 10% 500V
C511	1-117-663-11	FILM	0.22 $\mu$ F 5% 250V
C512	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C513	1-107-906-11	ELECT	10 $\mu$ F 20% 50V
C514	1-115-521-11	FILM	0.82 $\mu$ F 5% 250V
C515	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C516	1-119-862-11	FILM	0.3 $\mu$ F 5% 250V
C517	1-137-370-11	FILM	0.01 $\mu$ F 5% 50V
C518	1-117-954-11	FILM	4300pF 3% 1.8KV
C519	1-117-621-11	FILM	1200pF 3% 1.2KV
C520	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C521	1-107-444-11	CERAMIC	100pF 5% 2KV
C522	1-136-684-51	MYLAR	0.0022 $\mu$ F 10% 100V
C523	1-117-660-21	FILM	0.12 $\mu$ F 5% 250V
C524	1-110-641-51	ELECT	33 $\mu$ F 20% 200V
C525	1-136-060-00	FILM	0.047 $\mu$ F 5% 400V
C526	1-164-646-11	CERAMIC	2200pF 10% 500V
C527	1-117-879-91	CAPACITOR	0.01 $\mu$ F 10% 250V
C528	1-115-349-51	CERAMIC	0.01 $\mu$ F 2KV
C529	1-136-060-00	FILM	0.047 $\mu$ F 5% 400V
C530	1-117-660-21	FILM	0.12 $\mu$ F 5% 250V
C531	1-119-858-11	FILM	0.068 $\mu$ F 5% 250V
C532 $\triangle$	1-137-401-11	FILM	0.22 $\mu$ F 10% 100V



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C534 $\Delta$	1-137-419-11	FILM	0.033 $\mu$ F 10% 100V	C613 $\Delta$	1-162-115-00	CERAMIC	330pF 10% 2KV
C535	1-130-495-00	FILM	0.1 $\mu$ F 5% 50V	C614	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C536	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V	C615	1-163-037-11	CERAMIC CHIP	0.022 $\mu$ F 10% 50V
C538	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V	C616	1-107-907-11	ELECT	22 $\mu$ F 20% 25V
C539 $\Delta$	1-137-150-11	FILM	0.01 $\mu$ F 10% 100V	C617	1-107-907-11	ELECT	22 $\mu$ F 20% 25V
C540 $\Delta$	1-136-203-11	FILM	10000pF 5% 630V	C618	1-130-495-00	FILM	0.1 $\mu$ F 5% 50V
C541	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V	C619	1-164-161-11	CERAMIC CHIP	0.0022 $\mu$ F 10% 50V
C542 $\Delta$	1-126-964-11	ELECT	10 $\mu$ F 20% 50V	C620	1-162-117-00	CERAMIC	100pF 10% 500V
C543	1-163-251-11	CERAMIC CHIP	100pF 5% 50V	C621	1-104-712-11	ELECT	47 $\mu$ F 0 200V
C544 $\Delta$	1-137-370-11	FILM	0.01 $\mu$ F 5% 50V	C622	1-107-933-11	ELECT	100 $\mu$ F 20% 100V
C545	1-163-037-11	CERAMIC CHIP	0.022 $\mu$ F 10% 50V	C623	1-104-666-11	ELECT	220 $\mu$ F 20% 25V
C546	1-163-259-91	CERAMIC CHIP	220pF 5% 50V	C624	1-107-885-11	ELECT	3300 $\mu$ F 20% 16V
C547	1-107-902-11	ELECT	1 $\mu$ F 20% 50V	C625	1-126-768-11	ELECT	2200 $\mu$ F 20% 16V
C548	1-130-471-00	FILM	0.001 $\mu$ F 5% 50V	C626	1-104-653-11	ELECT	220 $\mu$ F 20% 16V
C549	1-137-375-11	FILM	0.068 $\mu$ F 5% 50V	C627	1-126-934-11	ELECT	220 $\mu$ F 20% 10V
C550	1-126-933-11	ELECT	100 $\mu$ F 20% 16V	C628	1-128-526-11	ELECT	100 $\mu$ F 20% 25V
C551	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V	C630	1-126-935-11	ELECT	470 $\mu$ F 20% 16V
C552	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V	C631	1-126-935-11	ELECT	470 $\mu$ F 20% 16V
C553 $\Delta$	1-163-009-11	CERAMIC CHIP	0.001 $\mu$ F 10% 50V	C632	1-111-070-51	ELECT	0.0022F 20% 25V
C554 $\Delta$	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F 10% 25V	C633	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F 10% 25V
C555 $\Delta$	1-130-495-00	FILM	0.1 $\mu$ F 5% 50V	C634	1-163-017-00	CERAMIC CHIP	0.0047 $\mu$ F 10% 50V
C556 $\Delta$	1-163-259-91	CERAMIC CHIP	220pF 5% 50V	C636	1-131-601-21	FILM	0.047 $\mu$ F 5% 250V
C557	1-107-907-11	ELECT	22 $\mu$ F 20% 50V	C637	1-107-888-11	ELECT	47 $\mu$ F 20% 25V
C558 $\Delta$	1-126-960-11	ELECT	1 $\mu$ F 20% 50V	C638	1-113-894-11	CERAMIC	100pF 10% 250V
C559	1-137-368-11	FILM	0.0047 $\mu$ F 5% 50V	C640	1-113-912-11	CERAMIC	0.0047 $\mu$ F 20% 250V
C560	1-119-859-71	FILM	0.36 $\mu$ F 5% 250V	C641	1-126-933-11	ELECT	100 $\mu$ F 20% 16V
C561 $\Delta$	1-163-009-11	CERAMIC CHIP	0.001 $\mu$ F 10% 50V	C643	1-113-912-11	CERAMIC	0.0047 $\mu$ F 20% 250V
C562	1-128-526-11	ELECT	100 $\mu$ F 20% 16V	C647	1-102-228-00	CERAMIC	470pF 10% 500V
C563	1-163-005-11	CERAMIC CHIP	470pF 10% 50V	C650	1-163-019-00	CERAMIC CHIP	0.0068 $\mu$ F 10% 50V
C564	1-107-823-11	CERAMIC CHIP	0.47 $\mu$ F 10% 16V	C660 $\Delta$	1-113-912-11	CERAMIC	0.0047 $\mu$ F 20% 250V
C566	1-128-551-11	ELECT	22 $\mu$ F 20% 25V	C661	1-117-699-11	CERAMIC	0.001 $\mu$ F 20% 250V
C568	1-136-060-00	FILM	0.047 $\mu$ F 5% 400V	C701	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F 10% 25V
C569	1-130-495-00	FILM	0.1 $\mu$ F 5% 50V	C702	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C570	1-128-526-11	ELECT	100 $\mu$ F 20% 25V	C703	1-136-169-00	FILM	0.22 $\mu$ F 5% 50V
C572	1-107-651-11	ELECT	4.7 $\mu$ F 20% 250V	C704	1-163-259-91	CERAMIC CHIP	220pF 5% 50V
C573	1-107-651-11	ELECT	4.7 $\mu$ F 20% 250V	C705	1-130-495-00	FILM	0.1 $\mu$ F 5% 50V
C574	1-117-879-91	CAPACITOR	0.01 $\mu$ F 10% 250V	C706	1-163-113-00	CERAMIC CHIP	68pF 5% 50V
C575	1-110-641-51	ELECT	33 $\mu$ F 20% 200V	C707	1-163-113-00	CERAMIC CHIP	68pF 5% 50V
C576	1-163-243-11	CERAMIC CHIP	47pF 5% 50V	C708	1-130-495-00	FILM	0.1 $\mu$ F 5% 50V
C577	1-115-349-51	CERAMIC	0.01 $\mu$ F 2KV	C709	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
C578	1-107-974-11	CERAMIC	47pF 5% 2KV	C710	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
C579	1-109-879-11	CERAMIC	22pF 5% 2KV	C711	1-130-495-00	FILM	0.1 $\mu$ F 5% 50V
C580	1-137-370-11	FILM	0.01 $\mu$ F 5% 50V	C712	1-130-495-00	FILM	0.1 $\mu$ F 5% 50V
C582	1-163-037-11	CERAMIC CHIP	0.022 $\mu$ F 10% 50V	C713	1-126-927-11	ELECT	2200 $\mu$ F 20% 10V
C583	1-130-495-00	FILM	0.1 $\mu$ F 5% 50V	C714	1-163-131-00	CERAMIC CHIP	390pF 5% 50V
C601	1-104-664-11	ELECT	47 $\mu$ F 20% 10V	C715	1-126-935-11	ELECT	470 $\mu$ F 20% 16V
C602	1-162-117-00	CERAMIC	100pF 10% 500V	C716	1-163-989-11	CERAMIC CHIP	0.033 $\mu$ F 10% 25V
C603	1-126-942-61	ELECT	1000 $\mu$ F 20% 25V	C718	1-163-989-11	CERAMIC CHIP	0.033 $\mu$ F 10% 25V
C604 $\Delta$	1-104-708-11	FILM	0.47 $\mu$ F 20% 250V	C723	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C605 $\Delta$	1-104-708-11	FILM	0.47 $\mu$ F 20% 250V	C725	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C606	1-113-894-11	CERAMIC	100pF 10% 250V	C729	1-163-003-11	CERAMIC CHIP	330pF 10% 50V
C608	1-104-653-11	ELECT	220 $\mu$ F 20% 16V	C733	1-163-003-11	CERAMIC CHIP	330pF 10% 50V
C610	1-107-852-11	ELECT(BLOCK)	330 $\mu$ F 20% 400V	C901	1-107-823-11	CERAMIC CHIP	0.47 $\mu$ F 10% 16V
C611	1-163-007-11	CERAMIC CHIP	680pF 10% 50V	C902	1-126-935-11	ELECT	470 $\mu$ F 20% 16V
C612 $\Delta$	1-119-858-11	FILM	0.068 $\mu$ F 5% 250V	C903	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V



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REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK
C905	1-137-375-11	FILM	0.068 $\mu$ F	5%	50V	D505	8-719-941-74	DIODE ERB91-02	
C906	1-136-177-00	FILM	1 $\mu$ F	5%	50V	D506	8-719-075-18	DIODE FMQ-G2FS	
C908	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	D507	8-719-109-85	DIODE RD5.1ESB2	
C909	1-126-926-11	ELECT	1000 $\mu$ F	20%	10V	D509	8-719-110-17	DIODE RD10ESB2	
C910	1-130-495-00	FILM	0.1 $\mu$ F	5%	50V	D510	8-719-018-82	DIODE RGP02-20EL-6394	
C911	1-137-370-11	FILM	0.01 $\mu$ F	5%	50V	D511	8-719-109-89	DIODE RD5.6ESB2	
C912	1-126-933-11	ELECT	100 $\mu$ F	20%	16V	D512	8-719-991-33	DIODE 1SS133T-77	
C913	1-130-495-00	FILM	0.1 $\mu$ F	5%	50V	D513	8-719-052-90	DIODE D1NL40-TA2	
C914	1-163-231-11	CERAMIC CHIP	15pF	5%	50V	D514	8-719-970-83	DIODE HSS82	
C915	1-163-231-11	CERAMIC CHIP	15pF	5%	50V	D515 $\Delta$	8-719-018-82	DIODE RGP02-20EL-6394	
C916	1-126-965-11	ELECT	22 $\mu$ F	20%	50V	D516	8-719-052-86	DIODE D2L40-TA	
C917	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	D517 $\Delta$	8-759-157-40	DIODE HZT33-02TE	
C918	1-126-964-11	ELECT	10 $\mu$ F	20%	50V	D518	8-719-110-17	DIODE RD10ESB2	
C920	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	D519	8-719-991-33	DIODE 1SS133T-77	
C921	1-126-935-11	ELECT	470 $\mu$ F	20%	16V	D520	8-719-018-82	DIODE RGP02-20EL-6394	
C922	1-109-889-11	ELECT	1 $\mu$ F	20%	50V	D521	8-719-028-72	DIODE RGP02-17EL-6433	
C923	1-163-133-00	CERAMIC CHIP	470pF	5%	50V	D522	8-719-991-33	DIODE 1SS133T-77	
C924	1-126-965-11	ELECT	22 $\mu$ F	20%	50V	D523	8-719-991-33	DIODE 1SS133T-77	
C925	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	D524	8-719-051-85	DIODE HSS83TD	
C926	1-126-935-11	ELECT	470 $\mu$ F	20%	16V	D525	8-719-051-85	DIODE HSS83TD	
C927	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	D527	8-719-109-85	DIODE RD5.1ESB2	
C928	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	D529	8-719-110-49	DIODE RD18ESB2	
C929	1-163-009-11	CERAMIC CHIP	0.001 $\mu$ F	10%	50V	D601 $\Delta$	8-719-510-53	DIODE D4SB60L	
C930	1-137-370-11	FILM	0.01 $\mu$ F	5%	50V	D602 $\Delta$	8-719-991-33	DIODE 1SS133T-77	
C931	1-163-133-00	CERAMIC CHIP	470pF	5%	50V	D603	8-719-991-33	DIODE 1SS133T-77	
C935	1-107-823-11	CERAMIC CHIP	0.47 $\mu$ F	10%	16V	D604	8-719-991-33	DIODE 1SS133T-77	
C936	1-163-251-11	CERAMIC CHIP	100pF	5%	50V	D605	8-719-110-31	DIODE RD12ESB2	
C937	1-107-823-11	CERAMIC CHIP	0.47 $\mu$ F	10%	16V	D606 $\Delta$	8-719-053-19	DIODE UF4007G23	
C938	1-126-934-11	ELECT	220 $\mu$ F	20%	16V	D607	8-719-053-19	DIODE UF4007G23	
						D608	8-719-110-49	DIODE RD18ESB2	
						D609 $\Delta$	8-719-991-33	DIODE 1SS133T-77	
						D610	8-719-109-81	DIODE RD4.7ESB2	
						D611	8-719-067-68	DIODE FMC-26UA	
						D612	8-719-053-19	DIODE UF4007G23	
						D613	8-719-076-20	DIODE BT149G-412-OT359	
						D614	8-719-032-12	DIODE D1NS6	
						D615	8-719-979-58	DIODE EGP10D	
						D616	8-719-979-58	DIODE EGP10D	
						D617	8-719-947-06	DIODE RGP10JPKG23	
						D618	8-719-058-38	DIODE FMN-G12S	
						D619	8-719-058-38	DIODE FMN-G12S	
						D620	8-719-300-76	DIODE RH-1A	
						D621	8-719-991-33	DIODE 1SS133T-77	
						D622	8-719-058-38	DIODE FMN-G12S	
						D704	8-719-991-33	DIODE 1SS133T-77	
						D901	8-719-073-01	DIODE MA111-(K8).S0	
						D902	8-719-047-98	DIODE HZU5.6B2TRF	
						D903	8-719-050-84	DIODE RB441Q-40T-77	
						D904	8-719-047-98	DIODE HZU5.6B2TRF	
						D905	8-719-991-33	DIODE 1SS133T-77	
						D906	8-719-988-61	DIODE 1SS355TE-17	
						D907	8-719-988-61	DIODE 1SS355TE-17	
						D908	8-719-988-61	DIODE 1SS355TE-17	
						D909	8-719-047-98	DIODE HZU5.6B2TRF	
						D910	8-719-047-98	DIODE HZU5.6B2TRF	

### CONNECTOR

CN501 *	1-580-798-11	CONNECTOR PIN (DY) 6P
CN502 *	1-564-512-11	PLUG, CONNECTOR 9P
CN512	1-695-915-11	TAB (CONTACT)
CN513	1-695-915-11	TAB (CONTACT)
CN600 $\Delta$	1-251-644-11	INLET, AC 3P (WITH NOISE FILTER)
CN601 *	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P
CN602 *	1-506-371-00	PIN, CONNECTOR 2P
CN604	1-695-915-11	TAB (CONTACT)
CN701 *	1-564-513-11	PLUG, CONNECTOR 10P
CN901 *	1-508-879-11	BASE POST
CN902 *	1-564-513-11	PLUG, CONNECTOR 10P
CN903 *	1-564-511-11	PLUG, CONNECTOR 8P

### DIODE

D401	8-719-052-90	DIODE D1NL40-TA2
D402	8-719-921-40	DIODE MTZJ-4.7C
D403	8-719-988-61	DIODE 1SS355TE-17
D404	8-719-058-24	DIODE RB501V-40TE-17
D501	8-719-110-31	DIODE RD12ESB2
D502	8-719-981-00	DIODE ERC81-004
D504	8-719-110-49	DIODE RD18ESB2





The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
L603	1-412-537-31	INDUCTOR	100 $\mu$ H	R503	1-216-675-91	METAL CHIP	10K 0.50% 1/10W
L604	1-406-665-11	INDUCTOR	100 $\mu$ H	R504	1-249-377-11	CARBON	0.47 5% 1/4W F
L606	1-406-665-11	INDUCTOR	100 $\mu$ H	R505	1-216-073-00	RES, CHIP	10K 5% 1/10W
<b>FILTER</b>				R506	1-215-481-00	METAL	330K 1% 1/4W
LF602 $\Delta$	1-429-180-11	TRANSFORMER, LINE FILTER		R507	1-215-431-00	METAL	2.7K 1% 1/4W
<b>TRANSISTOR</b>				R508	1-247-807-31	CARBON	100 5% 1/4W
Q501	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R509	1-247-863-91	CARBON	22K 5% 1/4W
Q502	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R	R510 $\Delta$	1-215-437-00	METAL	4.7K 1% 1/4W
Q503	8-729-035-54	TRANSISTOR	2SJ449	R511	1-249-381-11	CARBON	1 5% 1/4W F
Q504	8-729-031-89	TRANSISTOR	2SC3941A-Q(TA)	R512	1-249-389-11	CARBON	4.7 5% 1/4W
Q505	8-729-119-76	TRANSISTOR	2SA1175-HFE	R513	1-215-888-00	METAL OXIDE	220 5% 2W F
Q506	8-729-119-76	TRANSISTOR	2SA1175-HFE	R514	1-216-081-00	RES, CHIP	22K 5% 1/10W
Q507	8-729-049-17	TRANSISTOR	2SC5302-SONY-CC	R515	1-249-417-11	CARBON	1K 5% 1/4W F
Q508	8-729-119-78	TRANSISTOR	2SC2785-HFE	R516	1-214-844-81	METAL	150 1% 1/2W
Q510	8-729-046-60	TRANSISTOR	2SK2605LBSOONY	R517	1-216-393-00	METAL OXIDE	2.2 5% 3W F
Q511	8-729-042-34	TRANSISTOR	IRFU110A	R518	1-216-393-00	METAL OXIDE	2.2 5% 3W F
Q512	8-729-047-72	TRANSISTOR	2SK3155-01	R519	1-215-463-00	METAL	56K 1% 1/4W
Q513	8-729-043-41	TRANSISTOR	2SK2098-01MR-F119	R520	1-249-397-11	CARBON	22 5% 1/4W F
Q514	8-729-047-72	TRANSISTOR	2SK3155-01	R521	1-249-417-11	CARBON	1K 5% 1/4W F
Q515	8-729-047-72	TRANSISTOR	2SK3155-01	R522	1-249-401-11	CARBON	47 5% 1/4W
Q516	8-729-047-72	TRANSISTOR	2SK3155-01	R523	1-215-463-00	METAL	56K 1% 1/4W
Q518	8-729-140-50	TRANSISTOR	2SC3209LK	R524	1-215-463-00	METAL	56K 1% 1/4W
Q519	8-729-029-68	TRANSISTOR	DTC114TSA	R525	1-249-417-11	CARBON	1K 5% 1/4W F
Q520	8-729-035-54	TRANSISTOR	2SJ449	R527	1-249-429-11	CARBON	10K 5% 1/4W
Q521	8-729-119-76	TRANSISTOR	2SA1175-HFE	R528	1-216-081-00	RES, CHIP	22K 5% 1/10W
Q522	8-729-027-23	TRANSISTOR	DTA114EKA-T146	R529	1-249-429-11	CARBON	10K 5% 1/4W F
Q524	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R	R530	1-216-474-11	METAL OXIDE	82 5% 3W F
Q525	8-729-119-78	TRANSISTOR	2SC2785-HFE	R531	1-216-474-11	METAL OXIDE	82 5% 3W F
Q601	8-729-029-92	TRANSISTOR	DTC143ESA	R532	1-249-385-11	CARBON	2.2 5% 1/4W F
Q602 $\Delta$	8-729-048-61	TRANSISTOR	2SK2843LBS2SONY	R533	1-249-417-11	CARBON	1K 5% 1/4W F
Q603	8-729-900-53	TRANSISTOR	DTC114EK	R534	1-249-405-11	CARBON	100 5% 1/4W F
Q604	8-729-119-78	TRANSISTOR	2SC2785-HFE	R535	1-215-463-00	METAL	56K 1% 1/4W
Q605	8-729-900-53	TRANSISTOR	DTC114EK	R536	1-249-417-11	CARBON	1K 5% 1/4W F
Q903	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R537	1-215-463-00	METAL	56K 1% 1/4W
<b>RESISTOR</b>				R538	1-215-905-11	METAL OXIDE	10 5% 3W F
R401	1-249-381-11	CARBON	1 5% 1/4W F	R539	1-215-905-11	METAL OXIDE	10 5% 3W F
R402	1-215-866-11	METAL OXIDE	330 5% 1W F	R540 $\Delta$	1-215-476-00	METAL	200K 1% 1/4W
R403	1-214-661-21	METAL	1.5 1% 1/4W	R541 $\Delta$	1-215-421-00	METAL	1K 1% 1/4W
R404	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W	R542 $\Delta$	1-215-421-00	METAL	1K 1% 1/4W
R405	1-214-661-21	METAL	1.5 1% 1/4W	R543 $\Delta$	1-249-389-11	CARBON	4.7 5% 1/4W F
R406	1-216-677-11	METAL CHIP	12K 0.50% 1/10W	R544 $\Delta$	1-247-903-00	CARBON	1M 5% 1/4W
R407	1-216-057-00	RES, CHIP	2.2K 5% 1/10W	R545	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R408	1-216-073-00	RES, CHIP	10K 5% 1/10W	R546	1-215-457-00	METAL	33K 1% 1/4W
R409	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W	R547 $\Delta$	1-215-477-00	METAL	220K 1% 1/4W
R410	1-216-677-11	METAL CHIP	12K 0.50% 1/10W	R548	1-215-423-00	METAL	1.2K 1% 1/4W
R500	1-249-377-11	CARBON	0.47 5% 1/4W F	R549 $\Delta$	1-215-464-00	METAL	62K 1% 1/4W
R501	1-216-025-91	RES, CHIP	100 5% 1/10W	R550	1-215-423-00	METAL	1.2K 1% 1/4W
R502	1-218-758-11	METAL CHIP	180K 0.50% 1/10W	R551	1-216-687-11	METAL CHIP	33K 0.50% 1/10W
				R552 $\Delta$	1-215-463-00	METAL	56K 1% 1/4W
				R553	1-216-698-11	METAL CHIP	91K 0.50% 1/10W
				R554	1-218-756-11	METAL CHIP	150K 0.50% 1/10W
				R555	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
				R557	1-216-079-00	RES, CHIP	18K 5% 1/10W
				R558	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W
				R559	1-216-661-11	METAL CHIP	2.7K 0.50% 1/10W

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Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R560	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	R619	1-215-893-11	METAL OXIDE	1.5K 5% 2W F
R561	1-216-474-11	METAL OXIDE	82 5% 3W F	R620	1-216-687-11	METAL CHIP	33K 0.50% 1/10W
R562	1-215-451-00	METAL	18K 1% 1/4W	R621	1-216-098-00	RES, CHIP	110K 5% 1/10W
R563	1-249-383-11	CARBON	1.5 5% 1/4W F	R622	1-247-791-91	CARBON	22 5% 1/4W
R564 $\triangle$	1-216-089-91	RES, CHIP	47K 5% 1/10W	R623	1-216-615-91	METAL CHIP	33 0.50% 1/10W
R565	1-215-481-00	METAL	330K 1% 1/4W	R624	1-216-611-11	METAL CHIP	22 0.50% 1/10W
R566	1-215-859-00	METAL OXIDE	22 5% 1W F	R625	1-260-332-51	CARBON	2.2K 5% 1/2W
R567 $\triangle$	1-216-073-00	RES, CHIP	10K 5% 1/10W	R626	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R568 $\triangle$	1-249-437-11	CARBON	47K 5% 1/4W	R627	1-249-377-11	CARBON	0.47 5% 1/4W F
R569	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R628	1-216-674-11	METAL CHIP	9.1K 0.50% 1/10W
R570	1-249-417-11	CARBON	1K 5% 1/4W	R629	1-249-441-11	CARBON	100K 5% 1/4W
R571	1-215-926-00	METAL OXIDE	33K 5% 3W F	R630 $\triangle$	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W
R572	1-249-437-11	CARBON	47K 5% 1/4W	R631 $\triangle$	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W
R573	1-247-887-00	CARBON	220K 5% 1/4W	R633	1-249-429-11	CARBON	10K 5% 1/4W
R574	1-249-421-11	CARBON	2.2K 5% 1/4W	R634 $\triangle$	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W
R575	1-260-314-11	CARBON	68 5% 1/2W F	R635	1-215-925-11	METAL OXIDE	22K 5% 3W F
R576	1-249-437-11	CARBON	47K 5% 1/4W	R636	1-260-119-11	CARBON	47K 5% 1/2W
R577	1-215-908-00	METAL OXIDE	33 5% 3W F	R637	1-215-902-11	METAL OXIDE	47K 5% 2W F
R578	1-216-448-11	METAL OXIDE	39 5% 2W F	R638 $\triangle$	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W
R579	1-247-883-00	CARBON	150K 5% 1/4W	R639 $\triangle$	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W
R580	1-216-077-91	RES, CHIP	15K 5% 1/10W	R640	1-249-381-11	CARBON	1 5% 1/4W F
R581	1-249-429-11	CARBON	10K 5% 1/4W	R642	1-216-641-11	METAL CHIP	390 0.50% 1/10W
R582	1-249-402-11	CARBON	56 5% 1/4W F	R643	1-215-467-00	METAL	82K 1% 1/4W
R583	1-216-073-00	RES, CHIP	10K 5% 1/10W	R645	1-216-675-91	METAL CHIP	10K 0.50% 1/10W
R584	1-216-065-91	RES, CHIP	4.7K 5% 1/10W	R646	1-216-689-11	RES, CHIP	39K 5% 1/10W
R585	1-249-417-11	CARBON	1K 5% 1/4W	R647	1-216-073-00	RES, CHIP	10K 5% 1/10W
R586	1-249-421-11	CARBON	2.2K 5% 1/4W	R648	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W
R587	1-249-417-11	CARBON	1K 5% 1/4W	R649	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
R589	1-249-425-11	CARBON	4.7K 5% 1/4W	R650	1-215-471-00	METAL	120K 1% 1/4W
R590	1-215-453-00	METAL	22K 1% 1/4W	R654	1-216-344-00	METAL OXIDE	0.39 5% 1W F
R591	1-214-844-81	METAL	150 1% 1/2W	R655	1-247-807-31	CARBON	100 5% 1/4W
R592	1-214-844-81	METAL	150 1% 1/2W	R656	1-215-893-11	METAL OXIDE	1.5K 5% 2W F
R594	1-216-033-00	RES, CHIP	220 5% 1/10W	R660	1-260-119-11	CARBON	47K 5% 1/2W
R595 $\triangle$	1-215-477-00	METAL	220K 1% 1/4W	R661	1-215-902-11	METAL OXIDE	47K 5% 2W F
R596	1-215-423-00	METAL	1.2K 1% 1/4W	R663	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
R597	1-259-880-11	CARBON	2.2M 5% 1/4W	R665	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
R599	1-249-417-11	CARBON	1K 5% 1/4W	R703	1-249-410-11	CARBON	270 5% 1/4W
R600	1-205-998-11	CEMENTED	1 5% 10W	R704	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W
R602	1-219-513-11	CARBON	4.7M 5% 1/2W	R705	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R603	1-249-403-11	CARBON	68 5% 1/4W	R706	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R604 $\triangle$	1-220-827-91	REGISTER	560K 5% 1/2W	R707	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R605	1-211-761-71	FUSIBLE MELF	0.1 10% 1/2W	R708	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R606	1-218-768-11	METAL CHIP	470K 0.50% 1/10W	R709	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R607	1-216-081-00	RES, CHIP	22K 5% 1/10W	R710	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R608	1-215-473-00	METAL	150K 1% 1/4W	R711	1-216-346-00	METAL OXIDE	0.56 5% 1W F
R609	1-216-665-11	METAL CHIP	3.9K 0.50% 1/10W	R712	1-215-860-11	METAL OXIDE	33 5% 1W F
R610	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R713	1-216-347-11	METAL OXIDE	0.68 5% 1W F
R611	1-216-009-91	RES, CHIP	22 5% 1/10W	R716	1-215-860-11	METAL OXIDE	33 5% 1W F
R612	1-247-791-91	CARBON	22 5% 1/4W	R717	1-216-353-00	METAL OXIDE	2.2 5% 1W F
R613 $\triangle$	1-219-513-11	CARBON	4.7M 5% 1/2W	R718	1-215-863-11	METAL OXIDE	100 5% 1W F
R614	1-216-345-11	METAL OXIDE	0.47 5% 1W F	R719	1-216-679-11	METAL CHIP	15K 0.50% 1/10W
R615	1-216-117-00	RES, CHIP	680K 5% 1/10W	R724	1-216-422-11	METAL OXIDE	18 5% 1W F
R616	1-216-121-91	RES, CHIP	1M 5% 1/10W	R727	1-216-679-11	METAL CHIP	15K 0.50% 1/10W
R617	1-216-025-91	RES, CHIP	100 5% 1/10W	R728	1-215-863-11	METAL OXIDE	100 5% 1W F
R618	1-216-635-11	METAL CHIP	220 0.50% 1/10W	R729	1-216-353-00	METAL OXIDE	2.2 5% 1W F

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

The components identified by  $\boxtimes$  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R730	1-216-421-11	METAL OXIDE	12 5% 1W F	<b>VARIABLE RESISTOR</b>			
R731	1-216-295-91	SHORT		$\boxtimes$ RV501 $\triangle$	1-241-767-21	RES, ADJ, CERMET 100K	
R733	1-216-295-91	SHORT		<b>RELAY</b>			
R735	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	RY500	1-755-137-11	RELAY	
R737	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	RY601 $\triangle$	1-755-067-21	RELAY	
R739	1-216-073-00	RES, CHIP	10K 5% 1/10W	<b>SWITCH</b>			
R741	1-249-377-11	CARBON	0.47 5% 1/4W F	S602 $\triangle$	1-771-757-11	SWITCH, PUSH (1 KEY)	
R743	1-249-377-11	CARBON	0.47 5% 1/4W F	S901	1-692-431-21	SWITCH, TACTILE	
R745	1-216-298-00	RES, CHIP	2.2 5% 1/10W	S903	1-692-431-21	SWITCH, TACTILE	
R747	1-216-298-00	RES, CHIP	2.2 5% 1/10W	S904	1-692-431-21	SWITCH, TACTILE	
R753	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	S905	1-692-431-21	SWITCH, TACTILE	
R755	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	S906	1-692-431-21	SWITCH, TACTILE	
R903	1-216-049-91	RES, CHIP	1K 5% 1/10W	S908	1-692-431-21	SWITCH, TACTILE	
R904	1-216-049-91	RES, CHIP	1K 5% 1/10W	<b>SPARK GAP</b>			
R905	1-216-295-91	SHORT		SG501	1-519-422-11	GAP, SPARK	
R906	1-216-073-00	RES, CHIP	10K 5% 1/10W	<b>TRANSFORMER</b>			
R907	1-260-087-81	CARBON	100 5% 1/2W	T501 $\triangle$	1-453-311-11	FBT ASSY NX-4404//X4L4	
R908	1-216-057-00	RES, CHIP	2.2K 5% 1/10W	T503	1-433-979-11	TRANSFORMER, FERRITE (DFT)	
R909	1-216-057-00	RES, CHIP	2.2K 5% 1/10W	T504	1-433-978-11	TRANSFORMER, FERRITE (HDT)	
R910	1-249-411-11	CARBON	330 5% 1/4W	T505	1-431-413-11	TRANSFORMER, FERRITE (HST)	
R911	1-249-416-11	CARBON	820 5% 1/4W	T601 $\triangle$	1-433-847-14	TRANSFORMER, CONVERTER (SRT)	
R912	1-216-049-91	RES, CHIP	1K 5% 1/10W	<b>THERMISTOR</b>			
R913	1-216-025-91	RES, CHIP	100 5% 1/10W	TH501	1-807-796-11	THERMISTOR	
R914	1-216-025-91	RES, CHIP	100 5% 1/10W	TH600 $\triangle$	1-809-827-11	THERMISTOR, NTC	
R915	1-216-065-91	RES, CHIP	4.7K 5% 1/10W	TH601	1-803-540-11	THERMISTOR	
R916	1-216-077-91	RES, CHIP	15K 5% 1/10W	<b>VARISTOR</b>			
R917	1-216-077-91	RES, CHIP	15K 5% 1/10W	VA601 $\triangle$	1-801-073-31	VARISTOR TNR14V471K660	
R918	1-216-049-91	RES, CHIP	1K 5% 1/10W	<b>CRYSTAL</b>			
R920	1-216-049-91	RES, CHIP	1K 5% 1/10W	X901	1-767-641-11	VIBRATOR, CRYSTAL	
R921	1-216-295-91	SHORT		X902	1-767-933-11	OSCILLATOR, CERAMIC	
R922	1-216-073-00	RES, CHIP	10K 5% 1/10W	<b>MISCELLANEOUS</b>			
R923	1-216-295-91	SHORT		$\triangle$	1-419-255-12	COIL, DEGAUSSING	
R924	1-216-025-91	RES, CHIP	100 5% 1/10W	$\triangle$	1-452-923-41	NECK ASSEMBLY (NA-2915)	
R925	1-216-065-91	RES, CHIP	4.7K 5% 1/10W	$\triangle$	1-453-311-11	FLYBACK TRANSFORMER ASSY, NX-4404//X4L4	
R927	1-216-295-91	SHORT		$\triangle$	1-783-795-11	CORD SET, POWER (JAPAN ONLY)	
R929	1-216-065-91	RES, CHIP	4.7K 5% 1/10W	*	1-790-883-12	CABLE ASSY (15P DSUB)	
R931	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W		3-704-372-01	HOLDER, HV CABLE	
R932	1-216-077-91	RES, CHIP	15K 5% 1/10W	*	3-867-224-11	MANUAL, INSTRUCTION	
R933	1-249-417-11	CARBON	1K 5% 1/4W	*	3-867-225-11	MANUAL, CD-ROM	
R934	1-249-429-11	CARBON	10K 5% 1/4W		4-045-123-01	HOLDER, DEGAUSSING COIL	
R935	1-216-025-91	RES, CHIP	100 5% 1/10W	$\triangle$	8-738-550-61	ITC ASSY, 17TKB-R1	
R936	1-216-025-91	RES, CHIP	100 5% 1/10W				
R937	1-216-025-91	RES, CHIP	100 5% 1/10W				
R938	1-216-025-91	RES, CHIP	100 5% 1/10W				
R940	1-216-661-11	METAL CHIP	2.7K 0.50% 1/10W				
R943	1-249-413-11	CARBON	470 5% 1/4W				
R944	1-216-043-91	RES, CHIP	560 5% 1/10W				
R945	1-216-049-91	RES, CHIP	1K 5% 1/10W				
R946	1-216-053-00	RES, CHIP	1.5K 5% 1/10W				
R947	1-216-061-00	RES, CHIP	3.3K 5% 1/10W				
R950	1-216-051-00	RES, CHIP	1.2K 5% 1/10W				
R951	1-216-025-91	RES, CHIP	100 5% 1/10W				
R957	1-216-017-91	RES, CHIP	47 5% 1/10W				
R958	1-216-017-91	RES, CHIP	47 5% 1/10W				









# SERVICE MANUAL

# P780

*P780*  
*Equator Model*  
*Japan Model*  
*N. Hemisphere Model*  
*S. Hemisphere Model*  
*Chassis No. SCC-L29K-A*

## **D99** CHASSIS

### SUPPLEMENT - 1

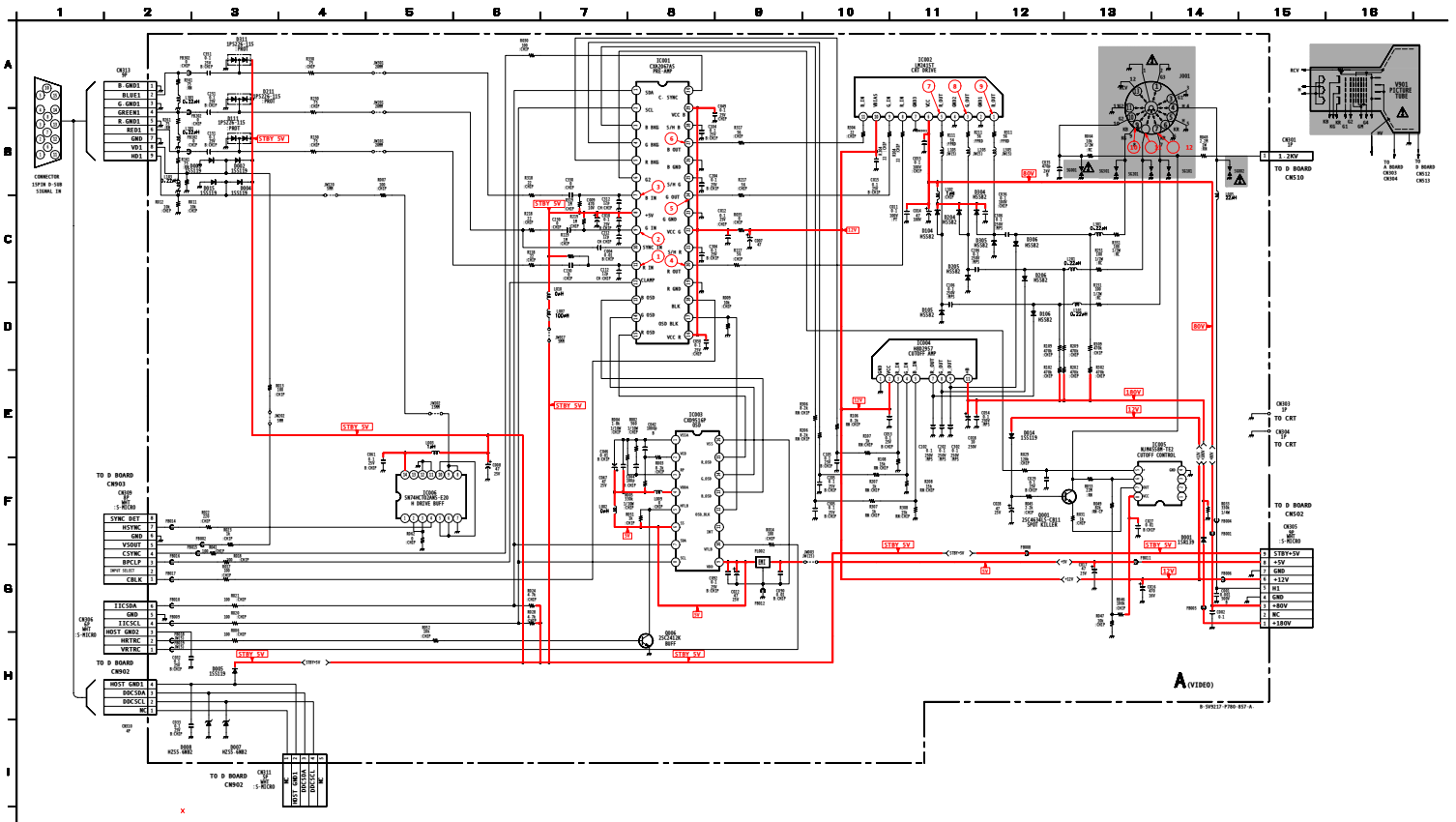
For Bridge Model, Midnight Gray units only

**Subject: Modified A and D Board Schematics and  
Updated Exploded View and Electrical Parts List.**

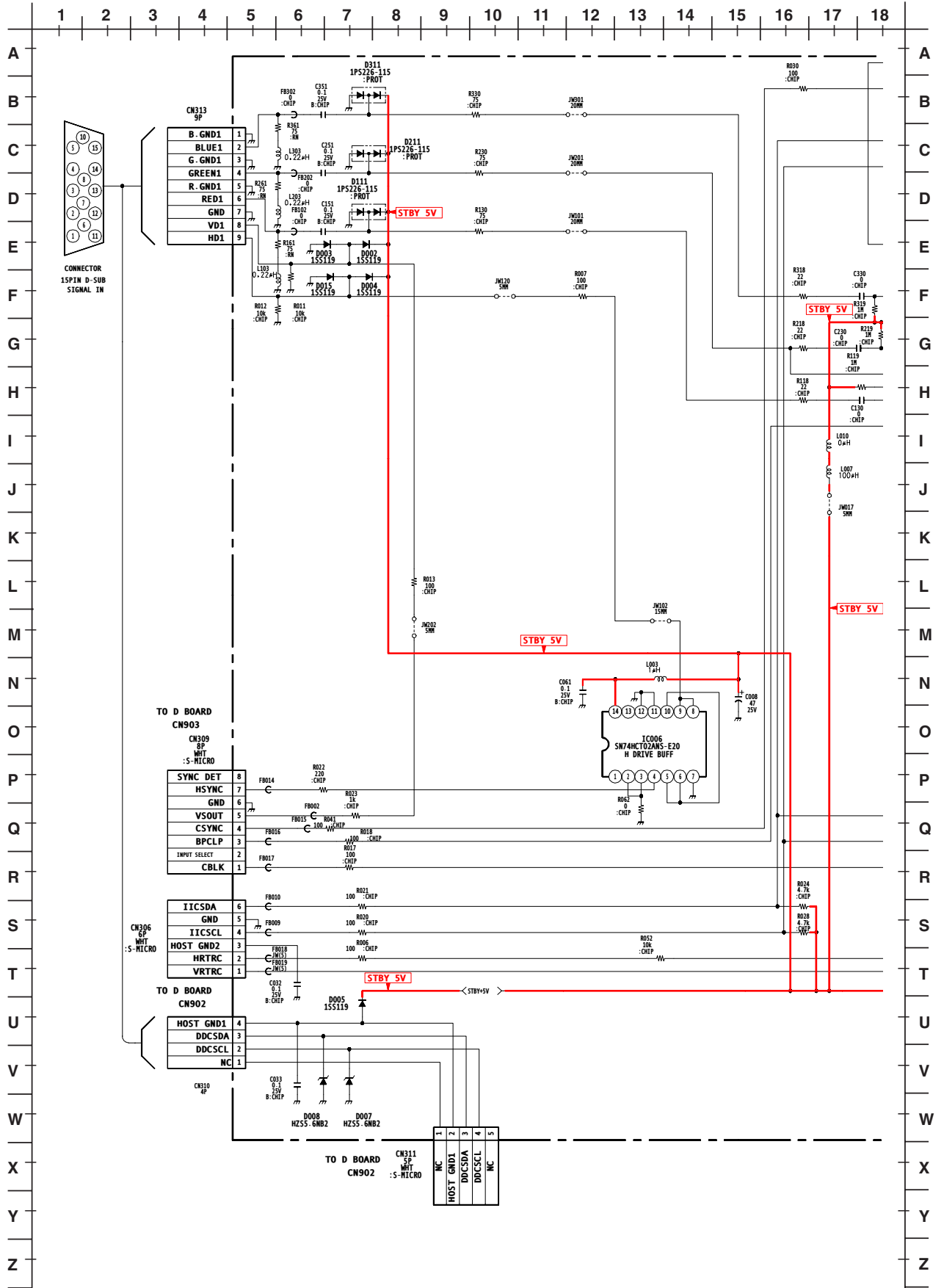
**File this supplement with the original service manual.**

**COLOR MONITOR**  
**DELL**®

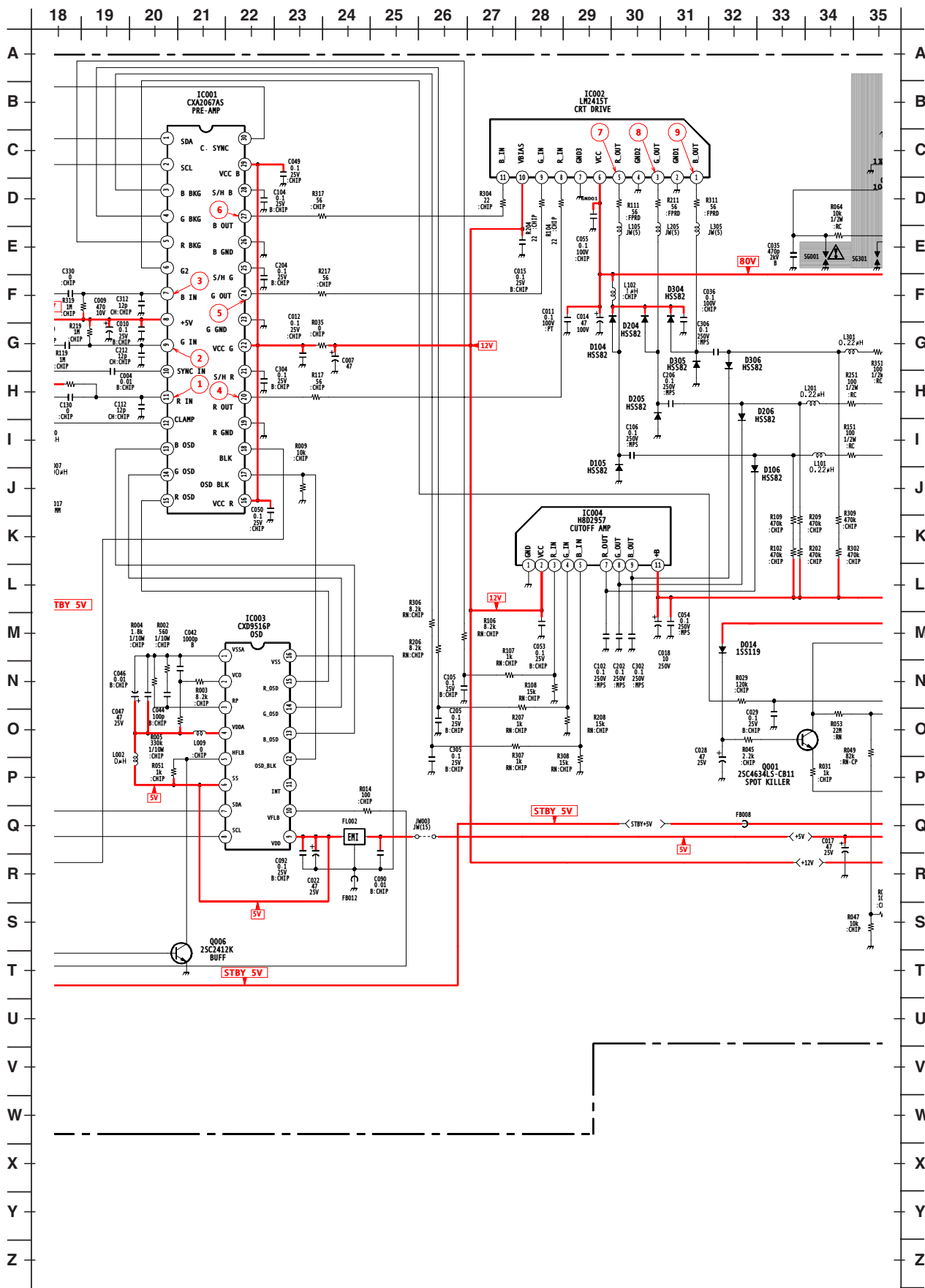
A BOARD SCHEMATIC DIAGRAM (Complete)



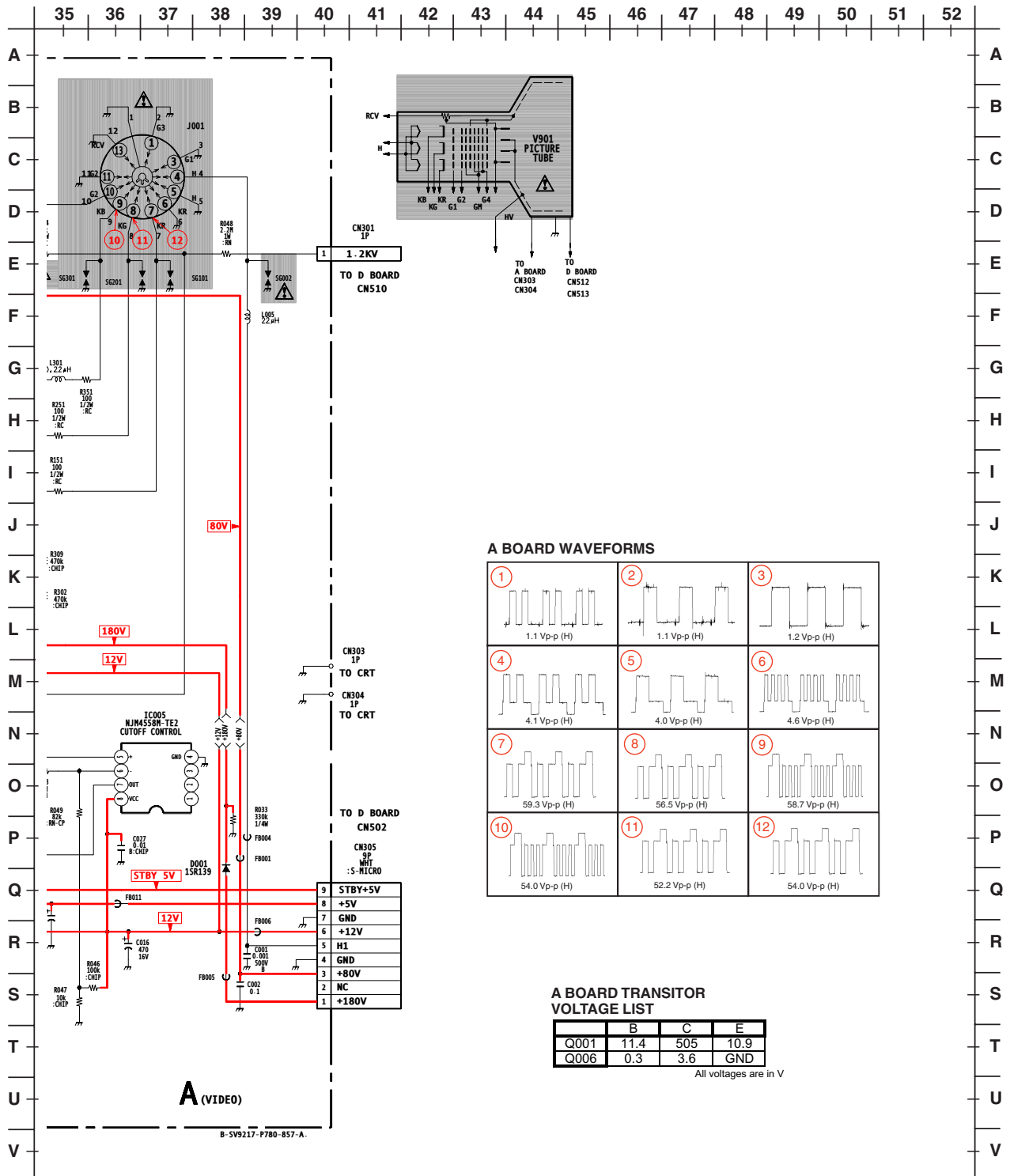
A BOARD SCHEMATIC DIAGRAM (1 of 3)



A BOARD SCHEMATIC DIAGRAM (2 of 3)

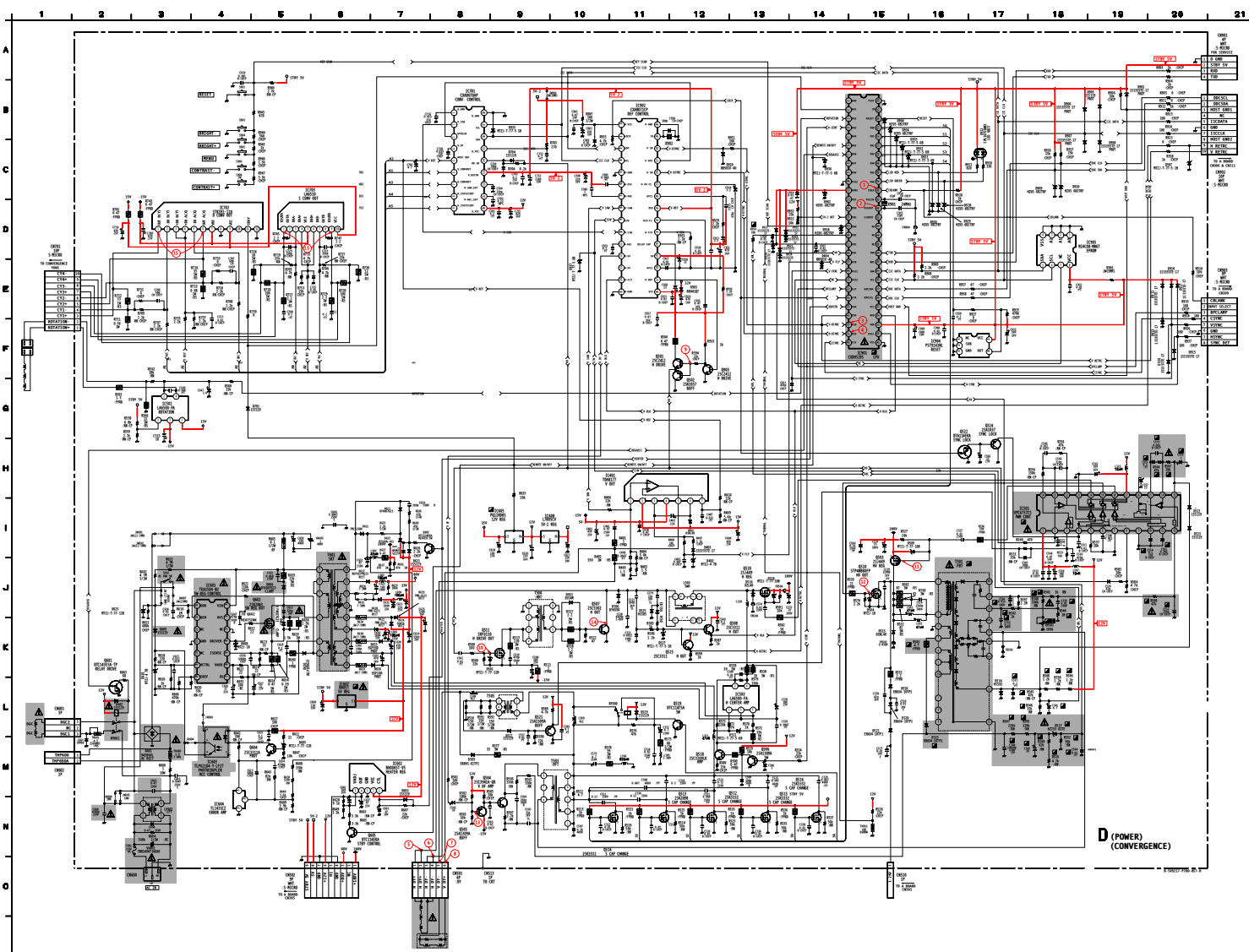


A BOARD SCHEMATIC DIAGRAM (3 of 3)



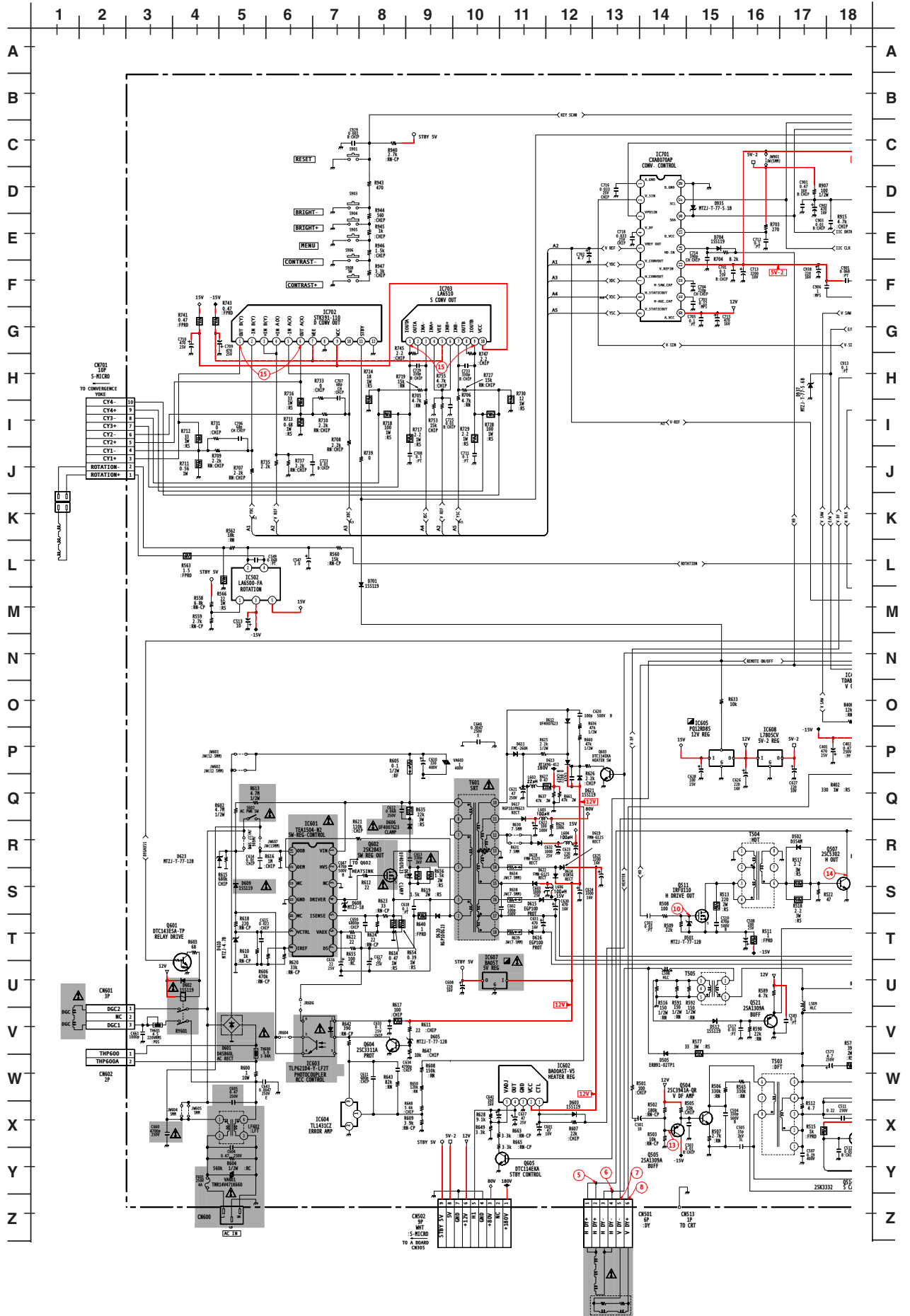


D BOARD SCHEMATIC DIAGRAM

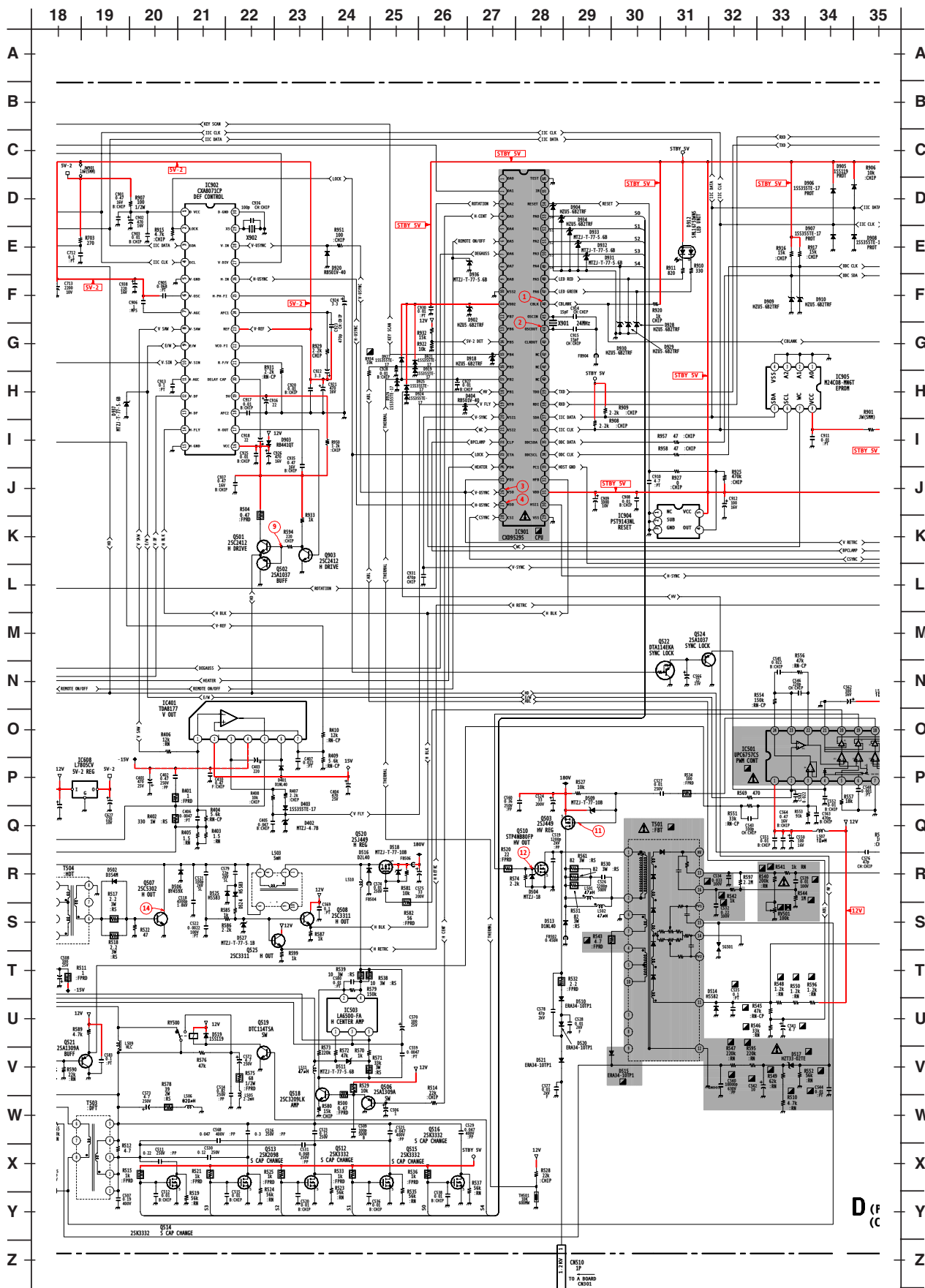




D BOARD SCHEMATIC DIAGRAM (1 of 3)



D BOARD SCHEMATIC DIAGRAM (2 of 3)

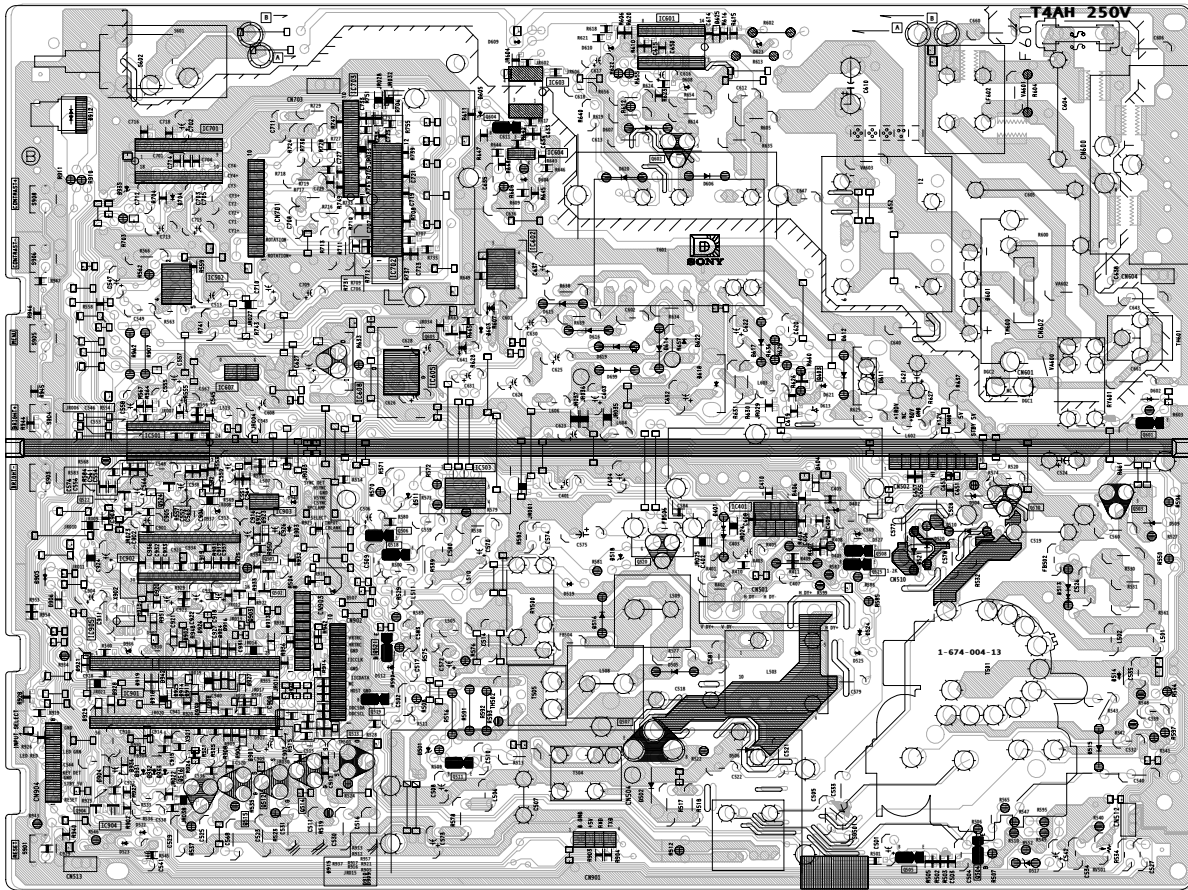




**D** [ POWER, CONVERGENCE ]

1 2 3 4 5 6 7 8 9 10 11 12 13

A  
B  
C  
D  
E  
F  
G  
H  
I



**D BOARD SEMICONDUCTOR LOCATION**

DIODE	D516	K-9	D607	C-9	902
D401	H-10	D517	M-15	D608	A-8 903
D402	G-12	D518	K-9	D609	A-8 904
D403	I-12	D519	J-9	D610	A-8 905
D404	H-12	D520	H-14	D611	F-14 906
D501	K-6	D521	I-13	D612	F-11 907
D502	L-9	D522	L-2	D613	F-12 908
D504	H-14	D523	L-2	D614	F-9 909
D505	J-10	D524	J-12	D615	F-8 910
D506	K-6	D525	J-12	D616	F-8 911
D507	J-5	D527	H-12	D617	F-11 912
D509	J-5	D529	M-14	D618	F-10 913
D510	H-17	D601	F-14	D619	F-8 914
D511	H-8	D602	F-17	D620	F-9 915
D512	K-6	D603	F-7	D621	F-8 916
D513	I-15	D604	C-8	D622	F-9 917
D514	F-10	D605	C-7	D704	C-3 918
D515	L-16	D606	F-10	D901	K-4

D902	J-3	D919	J-2	IC
D903	H-3	D920	K-5	401 11
D904	L-2	D921	J-3	501 3-3
D905	J-1	D924	J-3	502 3-3
D906	J-1	D925	J-2	503 3-7
D907	J-2	D926	J-3	601 1-10
D908	J-2	D927	J-3	602 3-7
D909	J-3	D928	K-1	603 3-8
D910	J-2	D929	K-1	604 3-8
D911	J-2	D930	J-2	605 3-6
D912	B-10	D931	L-3	607 3-4
D913	J-4	D932	L-3	608 3-4
D914	J-2	D933	L-3	701 3-3
D915	L-5	D934	L-2	702 3-6
D916	J-3	D935	C-3	703 3-5
D917	K-4	D936	J-2	901 3-3
D918	J-3	D937	H-3	902 3-3

IC904	L-2	D516	L-3
IC905	L-2	D519	H-11
<b>TRANSISTOR</b>			
Q501	L-4	D520	I-9
Q502	L-4	D521	J-8
Q503	H-16	D522	H-2
Q504	M-14	D524	H-3
Q505	M-13	D525	H-12
Q506	H-6	D501	F-17
Q507	K-10	D602	C-9
Q508	H-12	D603	F-12
Q510	H-14	D604	C-7
Q511	K-7	D605	F-7
Q512	L-4	D603	L-4
Q513	L-5	<b>CRYSTAL</b>	
Q514	K-5	K901	K-2
Q515	L-3	K902	J-2



## SECTION 6 EXPLODED VIEW

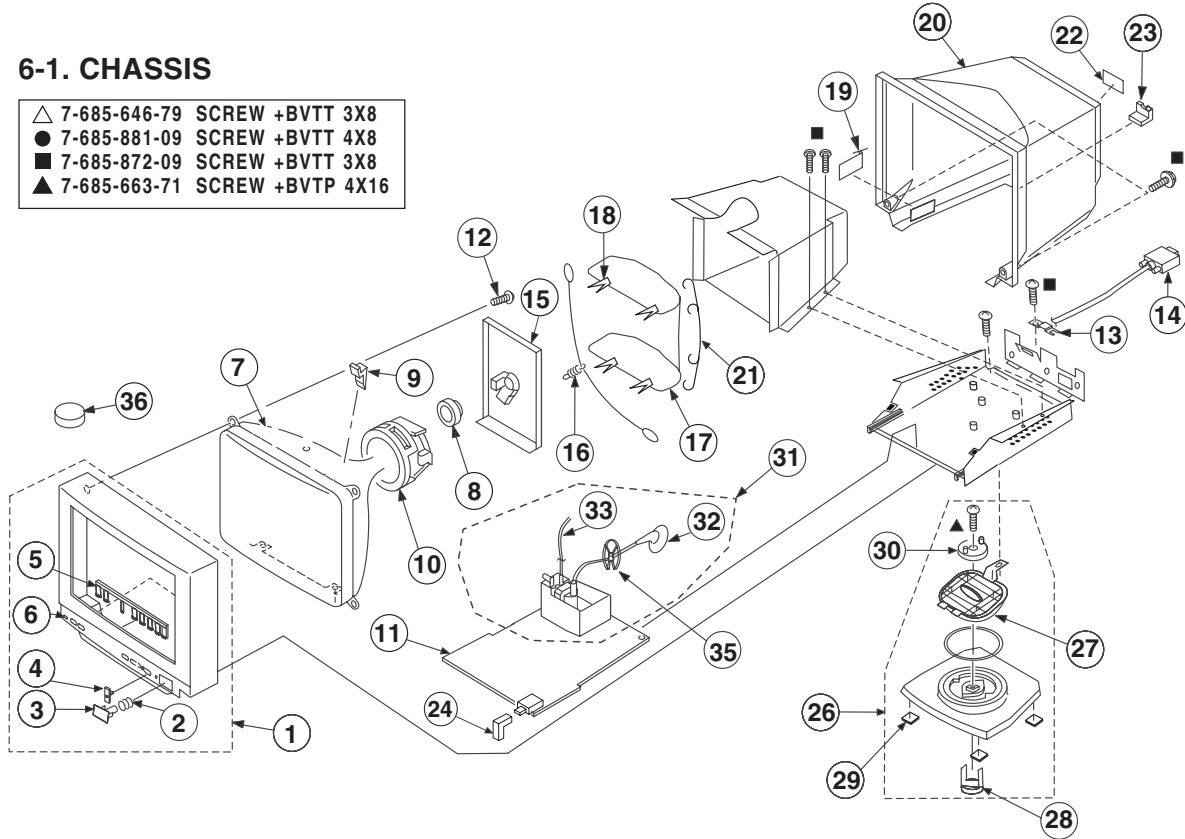
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The component parts of an assembly are indicated by the reference numbers in the remarks column.
- Items marked \* are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

**Note:** The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

**Note:** Les composants identifiés par un triangle et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

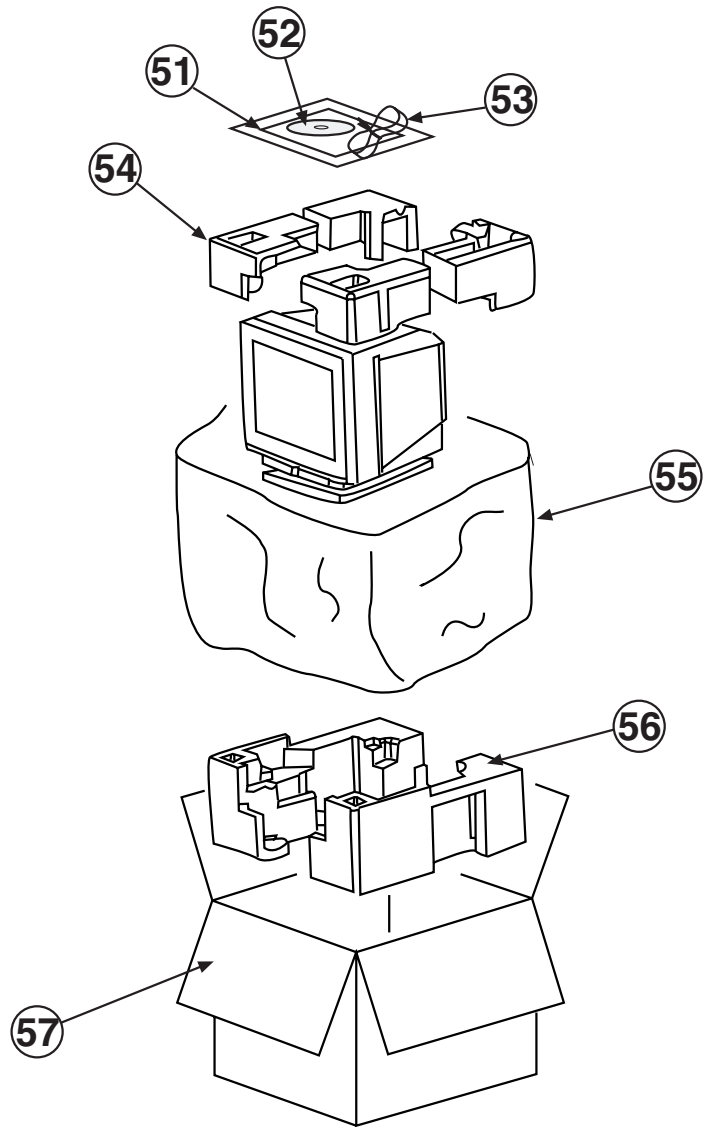
### 6-1. CHASSIS

- |             |              |                  |
|-------------|--------------|------------------|
| $\triangle$ | 7-685-646-79 | SCREW +BVTT 3X8  |
| ●           | 7-685-881-09 | SCREW +BVTT 4X8  |
| ■           | 7-685-872-09 | SCREW +BVTT 3X8  |
| ▲           | 7-685-663-71 | SCREW +BVTP 4X16 |



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	*	X-4038-361-1	BEZEL ASSY (2-5)	16	*	4-047-316-01	SPRING, EXTENSION
2		3-653-339-01	SPRING, COMPRESSION	17	$\triangle$	1-419-255-12	COIL, DEGAUSSING
3	*	4-072-192-11	BUTTON, POWER	18		4-045-123-01	HOLDER, DEGAUSSING COIL
4		4-072-194-01	GUIDE, LIGHT	19	*	4-062-195-61	COVER, CONNECTOR
5	*	4-072-238-11	BUTTON, MULTI	20	*	4-072-196-21	CABINET
6	*	4-072-193-11	BUTTON, RESET	21	*	4-369-319-00	BAND, COIL
7	$\triangle$	8-738-559-05	CRT 17TKB (Equator and SH only)	22	*	4-079-851-01	LABEL, INFORMATION
7	$\triangle$	8-738-558-05	CRT 17TKB (Japan and NH only)	23	*	4-072-198-11	COVER, CABLE
8	$\triangle$	1-452-923-41	NECK ASSEMBLY(NA-2915)	24	*	*4-394-972-31	CAP, POWER
9		2-162-100-21	SPACER, DY	26	*	X-4038-360-1	STAND ASSY (27-30)
10		8-451-435-41	DY Y17TKJ-Y	27	*	4-071-257-31	SLIDER
11		8-933-445-00	D COMPLETE PC BOARD (Except Japan)	28		4-070-735-02	STOPPER (B)
11		8-933-380-00	D COMPLETE PC BOARD (Japan only)	29	*	4-061-996-01	CUSHION
The high voltage leads associated with the FBT on the D board are not included and must be ordered separately. (See 32-33)				30		4-045-121-01	STOPPER (A), STAND
12		4-384-096-01	SCREW (4X16), TAPPING	31	$\triangle$	1-453-311-11	FBT ASSY, NX-4404//X4L4
13	*	4-045-131-01	STOPPER, CABLE	32		1-473-159-61	CAP ASSY, HIGH-VOLTAGE
14		1-791-722-11	CABLE ASSY (Except Japan model)	33		1-900-238-31	CONNECTOR ASSY
14		1-790-883-12	CABLE ASSY (Japan model only)	35		3-704-372-01	HOLDER, HV CABLE
15		8-933-381-00	A MOUNTED PC BOARD	36		1-452-032-00	MAGNET, DISC

6-2. PACKAGING AND ACCESSORIES



REF. NO.	PART NO.	DESCRIPTION	REMARK
51	3-867-224-12	QUICK SETUP (MANUAL)	
52	1-772-448-31	CD-ROM	
53	1-769-752-61	POWER CORD SET (Japan model only)	
54	* 4-072-182-02	CUSHION ASSY, UPPER	
55	* 4-059-174-11	BAG, PROTECTION	
56	* 4-072-185-02	CUSHION ASSY, LOWER	
57	* 4-072-189-03	CARTON, INDIVIDUAL	



## SECTION 7 ELECTRICAL PARTS LIST

**Note:**

The components identified by shading and mark **△** are critical for safety. Replace only with part number specified.

The components identified by **☒** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

**Note:**

Les composants identifiés par un trame et une marque **△** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked \* are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

**RESISTORS**

- All resistors are in ohms
- F : nonflammable

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When indicating parts by reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION	REMARK		REF. NO.	PART NO.	DESCRIPTION	REMARK	
<div style="border: 1px solid black; display: inline-block; padding: 5px; font-size: 2em; font-weight: bold;">A</div>									
	8-933-381-00	A BOARD, MOUNTED							
	4-382-854-11	SCREW (M3X10), P, SW (+)							
<b>CAPACITOR</b>									
C001	1-162-318-11	CERAMIC	0.001µF	10%	500V				
C002	1-106-220-00	MYLAR	0.1µF	10%	100V				
C004	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V				
C007	1-104-664-11	ELECT	47µF	20%	25V				
C008	1-104-664-11	ELECT	47µF	20%	25V				
C009	1-126-925-11	ELECT	470µF	20%	10V				
C010	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C011	1-106-220-00	MYLAR	0.1µF	10%	100V				
C012	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C014	1-107-932-11	ELECT	47µF	20%	100V				
C015	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C016	1-128-528-11	ELECT	470µF	20%	16V				
C017	1-104-664-11	ELECT	47µF	20%	25V				
C018	1-107-961-91	ELECT	10µF	20%	250V				
C022	1-104-664-11	ELECT	47µF	20%	25V				
C027	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V				
C028	1-104-664-11	ELECT	47µF	20%	25V				
C029	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C032	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C033	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C035	1-162-134-11	CERAMIC	470pF	10%	2KV				
C036	1-104-503-12	CERAMIC CHIP	0.1µF	10%	100V				
C042	1-102-074-00	CERAMIC	0.001µF	10%	50V				
C044	1-163-251-11	CERAMIC CHIP	100pF	5%	50V				
C046	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V				
C047	1-104-664-11	ELECT	47µF	20%	25V				
C049	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C050	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C053	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C054	1-137-528-11	MYLAR	0.1µF	10%	250V				
C055	1-104-503-12	CERAMIC CHIP	0.1µF	10%	100V				
C061	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C090	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V				
C092	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C102	1-137-528-11	MYLAR	0.1µF	10%	250V				
C104	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C105	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C106	1-137-528-11	MYLAR	0.1µF	10%	250V				
C112	1-163-229-11	CERAMIC CHIP	12pF	5%	50V				
C130	1-216-295-11	SHORT							
C151	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C202	1-137-528-11	MYLAR	0.1µF	10%	250V				
C204	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C205	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C206	1-137-528-11	MYLAR	0.1µF	10%	250V				
C212	1-163-229-11	CERAMIC CHIP	12pF	5%	50V				
C230	1-216-295-11	SHORT							
C251	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C302	1-137-528-11	MYLAR	0.1µF	10%	250V				
C304	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C305	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
C306	1-137-528-11	MYLAR	0.1µF	10%	250V				
C312	1-163-229-11	CERAMIC CHIP	12pF	5%	50V				
C330	1-216-295-11	SHORT							
C351	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V				
<b>CONNECTOR</b>									
CN301	1-506-108-41	PIN, CONNECTOR (TERMINAL PIN)							
CN303	1-695-915-11	TAB (CONTACT)							
CN304	1-695-915-11	TAB (CONTACT)							
CN305*	1-564-512-11	PLUG, CONNECTOR			9P				
CN306*	1-564-509-11	PLUG, CONNECTOR			6P				
CN309*	1-564-511-11	PLUG, CONNECTOR			8P				
CN310*	1-779-944-21	PIN, CONNECTOR (PC BOARD)			4P				
CN311*	1-564-508-11	PLUG, CONNECTOR			5P				



**Note:**

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

**Note:**

Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<b><u>DIODE</u></b>							
D001	8-719-970-02	DIODE 1SR139-400T31		IC004	8-749-016-27	IC H8D2957	
D002	8-719-911-19	DIODE 1SS119-25TD		IC005	8-759-100-96	IC NJM4558M-TE2	
D003	8-719-911-19	DIODE 1SS119-25TD		IC006	8-759-269-07	IC SN74HCT02ANSR	
D004	8-719-911-19	DIODE 1SS119-25TD		<b><u>JACK</u></b>			
D005	8-719-911-19	DIODE 1SS119-25TD		J001 $\triangle$	1-251-598-11	SOCKET, CRT	
D007	8-719-109-89	DIODE HZS5.6NB2TD		<b><u>CHIP CONDUCTOR</u></b>			
D008	8-719-109-89	DIODE HZS5.6NB2TD		JR002	1-216-296-91	SHORT	
D014	8-719-911-19	DIODE 1SS119-25TD		JR005	1-216-296-91	SHORT	
D015	8-719-911-19	DIODE 1SS119-25TD		JR006	1-216-296-91	SHORT	
D104	8-719-970-83	DIODE HSS82-TJ		JR007	1-216-296-91	SHORT	
D105	8-719-970-83	DIODE HSS82-TJ		JR016	1-216-296-91	SHORT	
D106	8-719-970-83	DIODE HSS82-TJ		JR017	1-216-296-91	SHORT	
D111	8-719-062-51	DIODE 1PS226-115		JR018	1-216-295-11	SHORT	
D204	8-719-970-83	DIODE HSS82-TJ		JR019	1-216-296-91	SHORT	
D205	8-719-970-83	DIODE HSS82-TJ		JR020	1-216-296-91	SHORT	
D206	8-719-970-83	DIODE HSS82-TJ		JR021	1-216-296-91	SHORT	
D211	8-719-062-51	DIODE 1PS226-115		<b><u>COIL</u></b>			
D304	8-719-970-83	DIODE HSS82-TJ		L002	1-412-911-11	FERRITE	0 $\mu$ H
D305	8-719-970-83	DIODE HSS82-TJ		L003	1-408-591-11	INDUCTOR	1 $\mu$ H
D306	8-719-970-83	DIODE HSS82-TJ		L005	1-412-529-11	INDUCTOR	22 $\mu$ H
D311	8-719-062-51	DIODE 1PS226-115		L007	1-410-482-31	INDUCTOR	100 $\mu$ H
<b><u>FERRITE BEAD</u></b>							
FB001	1-412-911-11	FERRITE	0 $\mu$ H	L009	1-216-295-11	SHORT	
FB004	1-412-911-11	FERRITE	0 $\mu$ H	L010	1-412-911-11	FERRITE	0 $\mu$ H
FB005	1-412-911-11	FERRITE	0 $\mu$ H	L101	1-414-137-31	INDUCTOR	0.22 $\mu$ H
FB006	1-412-911-11	FERRITE	0 $\mu$ H	L102	1-412-052-21	INDUCTOR CHIP	1 $\mu$ H
FB009	1-412-911-11	FERRITE	0 $\mu$ H	L103	1-414-137-31	INDUCTOR	0.22 $\mu$ H
FB010	1-412-911-11	FERRITE	0 $\mu$ H	L201	1-414-137-31	INDUCTOR	0.22 $\mu$ H
FB011	1-412-911-11	FERRITE	0 $\mu$ H	L203	1-414-137-31	INDUCTOR	0.22 $\mu$ H
FB012	1-412-911-11	FERRITE	0 $\mu$ H	L301	1-414-137-31	INDUCTOR	0.22 $\mu$ H
FB102	1-216-295-11	SHORT		L303	1-414-137-31	INDUCTOR	0.22 $\mu$ H
FB202	1-216-295-11	SHORT		<b><u>TRANSISTOR</u></b>			
FB302	1-216-295-11	SHORT		Q001	8-729-046-80	TRANSISTOR 2SC4634LS-CB11	
<b><u>FILTER</u></b>				Q006	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
FL002	1-412-911-11	FERRITE	0 $\mu$ H				
<b><u>IC</u></b>							
IC001	8-752-094-09	IC CXA2067AS					
IC002	8-759-596-65	IC LM2415T					
IC003	8-759-589-35	IC CXD9516P					



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>RESISTOR</b>				R151	1-202-549-00	SOLID	100 20% 1/2W
R002	1-216-043-91	RES-CHIP	560 5% 1/10W	R161	1-215-394-00	METAL	75 1% 1/4W
R003	1-216-071-00	RES-CHIP	8.2K 5% 1/10W	R202	1-216-113-00	RES-CHIP	470K 5% 1/10W
R004	1-216-055-00	RES-CHIP	1.8K 5% 1/10W	R204	1-216-009-91	RES-CHIP	22 5% 1/10W
R005	1-216-109-00	RES-CHIP	330K 5% 1/10W	R206	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W
R006	1-216-025-11	RES-CHIP	100 5% 1/10W	R207	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R007	1-216-025-11	RES-CHIP	100 5% 1/10W	R208	1-216-679-11	METAL CHIP	15K 0.50% 1/10W
R009	1-216-073-00	RES-CHIP	10K 5% 1/10W	R209	1-216-113-00	RES-CHIP	470K 5% 1/10W
R011	1-216-073-00	RES-CHIP	10K 5% 1/10W	R211	1-249-402-11	CARBON	56 5% 1/4W
R012	1-216-073-00	RES-CHIP	10K 5% 1/10W	R217	1-216-019-00	RES-CHIP	56 5% 1/10W
R013	1-216-025-11	RES-CHIP	100 5% 1/10W	R218	1-216-009-91	RES-CHIP	22 5% 1/10W
R014	1-216-025-11	RES-CHIP	100 5% 1/10W	R219	1-216-121-11	RES-CHIP	1M 5% 1/10W
R017	1-216-025-11	RES-CHIP	100 5% 1/10W	R230	1-216-022-00	RES-CHIP	75 5% 1/10W
R018	1-216-025-11	RES-CHIP	100 5% 1/10W	R251	1-202-549-00	SOLID	100 20% 1/2W
R020	1-216-025-11	RES-CHIP	100 5% 1/10W	R261	1-215-394-00	METAL	75 1% 1/4W
R021	1-216-025-11	RES-CHIP	100 5% 1/10W	R302	1-216-113-00	RES-CHIP	470K 5% 1/10W
R022	1-216-033-00	RES-CHIP	220 5% 1/10W	R304	1-216-009-91	RES-CHIP	22 5% 1/10W
R023	1-216-049-11	RES-CHIP	1K 5% 1/10W	R306	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W
R024	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	R307	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R028	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	R308	1-216-679-11	METAL CHIP	15K 0.50% 1/10W
R029	1-216-099-00	RES-CHIP	120K 5% 1/10W	R309	1-216-113-00	RES-CHIP	470K 5% 1/10W
R030	1-216-025-11	RES-CHIP	100 5% 1/10W	R311	1-249-402-11	CARBON	56 5% 1/4W
R031	1-216-049-11	RES-CHIP	1K 5% 1/10W	R317	1-216-019-00	RES-CHIP	56 5% 1/10W
R033	1-247-891-00	CARBON	330K 5% 1/4W	R318	1-216-009-91	RES-CHIP	22 5% 1/10W
R035	1-216-295-11	SHORT		R319	1-216-121-11	RES-CHIP	1M 5% 1/10W
R041	1-216-025-11	RES-CHIP	100 5% 1/10W	R330	1-216-022-00	RES-CHIP	75 5% 1/10W
R045	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R351	1-202-549-00	SOLID	100 20% 1/2W
R046	1-216-097-11	RES-CHIP	100K 5% 1/10W	R361	1-215-394-00	METAL	75 1% 1/4W
R047	1-216-073-00	RES-CHIP	10K 5% 1/10W	<b>SPARK GAP</b>			
R048	1-219-398-51	METAL	2.2M 5% 1W	SG001	$\triangle$ 1-519-422-11	GAP, SPARK	
R049	1-216-697-91	METAL CHIP	82K 0.50% 1/10W	SG002	$\triangle$ 1-517-499-21	GAP, SPARK	
R051	1-216-049-11	RES-CHIP	1K 5% 1/10W	SG101	$\triangle$ 1-517-499-21	GAP, SPARK	
R052	1-216-073-00	RES-CHIP	10K 5% 1/10W	SG201	$\triangle$ 1-517-499-21	GAP, SPARK	
R053	1-219-621-91	METAL	22M 10% 1/4W	SG301	$\triangle$ 1-517-499-21	GAP, SPARK	
R062	1-216-295-11	SHORT					
R064	1-202-830-00	SOLID	10K 20% 1/2W				
R102	1-216-113-00	RES-CHIP	470K 5% 1/10W				
R104	1-216-009-91	RES-CHIP	22 5% 1/10W				
R106	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W				
R107	1-216-651-11	METAL CHIP	1K 0.50% 1/10W				
R108	1-216-679-11	METAL CHIP	15K 0.50% 1/10W				
R109	1-216-113-00	RES-CHIP	470K 5% 1/10W				
R111	1-249-402-11	CARBON	56 5% 1/4W				
R117	1-216-019-00	RES-CHIP	56 5% 1/10W				
R118	1-216-009-91	RES-CHIP	22 5% 1/10W				
R119	1-216-121-11	RES-CHIP	1M 5% 1/10W				
R130	1-216-022-00	RES-CHIP	75 5% 1/10W				



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>D</b>							
	8-933-445-00	D BOARD, COMPLETE (Except Japan model)					
	8-933-380-00	D BOARD, COMPLETE (Japan model only)					
	1-533-223-11	CLIP, FUSE					
	3-703-319-01	PURSE LOCK (DIA.15)					
	4-072-322-01	HOLDER, LED					
	4-382-854-01	SCREW (M3X8), P,	SW (+)				
	4-382-854-11	SCREW (M3X10), P,	SW (+)				
	4-382-854-21	SCREW (M3X14), P,	SW (+)				
	<b>CAPACITOR</b>						
	C401	1-128-528-11	ELECT	470 $\mu$ F	20%	25V	
	C402	1-117-667-31	FILM	0.47 $\mu$ F	5%	250V	
	C403	1-107-911-11	ELECT	220 $\mu$ F	20%	50V	
	C404	1-128-528-11	ELECT	470 $\mu$ F	20%	25V	
	C405	1-104-760-11	CERAMIC CHIP	0.047 $\mu$ F	10%	50V	
	C406	1-137-368-11	MYLAR	.0047 $\mu$ F	5%	50V	
	C407	1-137-372-11	MYLAR	0.022 $\mu$ F	5%	50V	
	C410	1-164-005-11	CERAMIC CHIP	0.47 $\mu$ F	25V		
	C501	1-126-964-11	ELECT	10 $\mu$ F	20%	50V	
	C502	1-137-150-11	MYLAR	0.01 $\mu$ F	5%	50V	
	C503	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	
	C504	1-102-030-00	CERAMIC	330pF	10%	500V	
	C505	1-109-878-11	CERAMIC	15pF	5%	2KV	
	C506	1-126-960-11	ELECT	1 $\mu$ F	20%	50V	
	C507	1-131-653-11	FILM	0.19 $\mu$ F	5%	400V	
	C508	1-128-526-11	ELECT	100 $\mu$ F	20%	25V	
	C509	1-162-117-00	CERAMIC	100pF	10%	500V	
	C510	1-102-228-00	CERAMIC	470pF	10%	500V	
	C511	1-117-663-11	FILM	0.22 $\mu$ F	5%	250V	
	C512	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	
	C513	1-107-906-11	ELECT	10 $\mu$ F	20%	50V	
	C514	1-115-521-11	FILM	0.82 $\mu$ F	5%	250V	
	C515	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	
	C516	1-119-862-11	FILM	0.3 $\mu$ F	5%	250V	
	C517	1-137-150-11	MYLAR	0.01 $\mu$ F	5%	50V	
	C518	1-117-954-11	FILM	4300pF	3%	1.8KV	
	C519	1-117-621-11	FILM	1200pF	3%	1.2KV	
	C520	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	
	C521	1-107-444-11	CERAMIC	100pF	5%	2KV	
	C522	1-136-684-51	MYLAR	0.0022 $\mu$ F	10%	100V	
	C523	1-117-660-21	FILM	0.12 $\mu$ F	5%	250V	
	C524	1-110-641-51	ELECT	33 $\mu$ F	20%	200V	
	C525	1-136-060-00	FILM	0.047 $\mu$ F	5%	400V	
	C526	1-164-646-11	CERAMIC	2200pF	10%	500V	
	C527	1-117-879-91	MYLAR	0.01 $\mu$ F	10%	250V	
	C528	1-115-349-51	CERAMIC	0.01 $\mu$ F	2KV		
	C529	1-136-060-00	FILM	0.047 $\mu$ F	5%	400V	
	C530	1-117-660-21	FILM	0.12 $\mu$ F	5%	250V	
	C531	1-119-858-11	FILM	0.068 $\mu$ F	5%	250V	
	C532 $\Delta$	1-137-401-11	MYLAR	0.22 $\mu$ F	10%	100V	
	C534 $\Delta$	1-137-419-11	MYLAR	0.033 $\mu$ F	10%	100V	
	C535	1-130-495-00	MYLAR	0.1 $\mu$ F	5%	50V	
	C536	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	
	C538	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	
	C539 $\Delta$	1-137-150-11	MYLAR	0.01 $\mu$ F	10%	100V	
	C540 $\Delta$	1-136-203-11	FILM	10000pF	5%	630V	
	C541	1-126-963-11	ELECT	4.7 $\mu$ F	20%	50V	
	C542 $\Delta$	1-126-964-11	ELECT	10 $\mu$ F	20%	50V	
	C543	1-163-251-11	CERAMIC CHIP	100pF	5%	50V	
	C544 $\Delta$	1-137-150-11	MYLAR	0.01 $\mu$ F	5%	50V	
	C545	1-163-037-11	CERAMIC CHIP	0.022 $\mu$ F	10%	50V	
	C546	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	
	C547	1-107-902-11	ELECT	1 $\mu$ F	20%	50V	
	C548	1-130-471-00	MYLAR	0.001 $\mu$ F	5%	50V	
	C549	1-137-375-11	MYLAR	0.068 $\mu$ F	5%	50V	
	C550	1-126-933-11	ELECT	100 $\mu$ F	20%	16V	
	C551	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	
	C552	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	
	C553 $\Delta$	1-163-009-11	CERAMIC CHIP	0.001 $\mu$ F	10%	50V	
	C554 $\Delta$	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F	10%	25V	
	C555 $\Delta$	1-130-495-00	MYLAR	0.1 $\mu$ F	5%	50V	
	C556 $\Delta$	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	
	C557	1-107-907-11	ELECT	22 $\mu$ F	20%	50V	
	C558 $\Delta$	1-126-960-11	ELECT	1 $\mu$ F	20%	50V	
	C559	1-137-368-11	MYLAR	.0047 $\mu$ F	5%	50V	
	C560	1-119-859-71	FILM	0.36 $\mu$ F	5%	250V	
	C561 $\Delta$	1-163-009-11	CERAMIC CHIP	0.001 $\mu$ F	10%	50V	
	C562	1-107-882-91	ELECT	100 $\mu$ F	20%	16V	
	C563	1-163-005-11	CERAMIC CHIP	470pF	10%	50V	
	C564	1-107-823-11	CERAMIC CHIP	0.47 $\mu$ F	10%	16V	
	C566	1-128-551-11	ELECT	22 $\mu$ F	20%	25V	
	C568	1-136-060-00	FILM	0.047 $\mu$ F	5%	400V	
	C569	1-130-495-00	MYLAR	0.1 $\mu$ F	5%	50V	
	C570	1-128-526-11	ELECT	100 $\mu$ F	20%	25V	
	C572	1-107-651-11	ELECT	4.7 $\mu$ F	20%	250V	
	C573	1-107-651-11	ELECT	4.7 $\mu$ F	20%	250V	
	C574	1-117-879-91	MYLAR	0.01 $\mu$ F	10%	250V	
	C575	1-110-641-51	ELECT	33 $\mu$ F	20%	200V	
	C576	1-163-243-11	CERAMIC CHIP	47pF	5%	50V	
	C577	1-115-349-51	CERAMIC	0.01 $\mu$ F	2KV		
	C578	1-107-974-11	CERAMIC	47pF	5%	2KV	
	C579	1-109-879-11	CERAMIC	22pF	5%	2KV	
	C580	1-137-150-11	MYLAR	0.01 $\mu$ F	5%	50V	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C582	1-163-037-11	CERAMIC CHIP	0.022 $\mu$ F 10% 50V	C707	1-163-113-00	CERAMIC CHIP	68pF 5% 50V
C583	1-130-495-00	MYLAR	0.1 $\mu$ F 5% 50V	C708	1-130-495-00	MYLAR	0.1 $\mu$ F 5% 50V
C601	1-104-664-11	ELECT	47 $\mu$ F 20% 10V	C709	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
C602	1-162-117-00	CERAMIC	100pF 10% 500V	C710	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
C603	1-126-942-61	ELECT	1000 $\mu$ F 20% 25V	C711	1-130-495-00	MYLAR	0.1 $\mu$ F 5% 50V
C604 $\Delta$	1-104-708-11	MYLAR	0.47 $\mu$ F 20% 250V	C712	1-130-495-00	MYLAR	0.1 $\mu$ F 5% 50V
C605 $\Delta$	1-104-708-11	MYLAR	0.47 $\mu$ F 20% 250V	C713	1-126-927-11	ELECT	2200 $\mu$ F 20% 10V
C608	1-104-653-11	ELECT	220 $\mu$ F 20% 16V	C714	1-163-131-00	CERAMIC CHIP	390pF 5% 50V
C610	1-117-752-11	ELECT(BLOCK) (except for Japan model)	330 $\mu$ F 20% 450V	C715	1-126-935-11	ELECT	470 $\mu$ F 20% 16V
C610	1-117-852-11	ELECT(BLOCK) (for Japan model only)	330 $\mu$ F 20% 400V	C716	1-163-989-11	CERAMIC CHIP	0.033 $\mu$ F 10% 25V
C611	1-163-007-11	CERAMIC CHIP	680pF 10% 50V	C718	1-163-989-11	CERAMIC CHIP	0.033 $\mu$ F 10% 25V
C612 $\Delta$	1-119-858-11	FILM	0.068 $\mu$ F 5% 250V	C723	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C613 $\Delta$	1-162-115-00	CERAMIC	330pF 10% 2KV	C725	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C614	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V	C729	1-163-003-11	CERAMIC CHIP	330pF 10% 50V
C615	1-163-037-11	CERAMIC CHIP	0.022 $\mu$ F 10% 50V	C733	1-163-003-11	CERAMIC CHIP	330pF 10% 50V
C616	1-107-907-11	ELECT	22 $\mu$ F 20% 25V	C901	1-107-823-11	CERAMIC CHIP	0.47 $\mu$ F 10% 16V
C617	1-107-907-11	ELECT	22 $\mu$ F 20% 25V	C902	1-126-935-11	ELECT	470 $\mu$ F 20% 16V
C618	1-130-495-00	MYLAR	0.1 $\mu$ F 5% 50V	C903	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C619	1-164-161-11	CERAMIC CHIP	0.0022 $\mu$ F 10% 50V	C905	1-137-375-11	MYLAR	0.068 $\mu$ F 5% 50V
C620	1-162-117-00	CERAMIC	100pF 10% 500V	C906	1-136-177-00	FILM	1 $\mu$ F 5% 50V
C621	1-104-712-11	ELECT	47 $\mu$ F 200V	C908	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C622	1-107-933-11	ELECT	100 $\mu$ F 20% 100V	C909	1-126-926-11	ELECT	1000 $\mu$ F 20% 10V
C623	1-104-666-11	ELECT	220 $\mu$ F 20% 25V	C910	1-107-713-11	ELECT	4.7 $\mu$ F 20% 50V
C624	1-107-885-11	ELECT	3300 $\mu$ F 20% 16V	C911	1-137-150-11	MYLAR	0.01 $\mu$ F 5% 50V
C625	1-126-768-11	ELECT	2200 $\mu$ F 20% 16V	C912	1-126-933-11	ELECT	100 $\mu$ F 20% 16V
C626	1-104-653-11	ELECT	220 $\mu$ F 20% 16V	C913	1-130-495-00	MYLAR	0.1 $\mu$ F 5% 50V
C627	1-126-934-11	ELECT	220 $\mu$ F 20% 10V	C914	1-163-231-11	CERAMIC CHIP	15pF 5% 50V
C628	1-128-526-11	ELECT	100 $\mu$ F 20% 25V	C915	1-163-231-11	CERAMIC CHIP	15pF 5% 50V
C630	1-126-935-11	ELECT	470 $\mu$ F 20% 16V	C916	1-126-965-11	ELECT	22 $\mu$ F 20% 50V
C631	1-126-935-11	ELECT	470 $\mu$ F 20% 16V	C917	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C632	1-128-954-21	ELECT	1000 $\mu$ F 20% 25V	C918	1-126-965-11	ELECT	22 $\mu$ F 20% 50V
C633	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F 10% 25V	C920	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C634	1-163-017-00	CERAMIC CHIP	.0047 $\mu$ F 10% 50V	C921	1-126-935-11	ELECT	470 $\mu$ F 20% 16V
C637	1-107-888-11	ELECT	47 $\mu$ F 20% 25V	C922	1-107-712-11	ELECT	3.3 $\mu$ F 20% 50V
C640	1-113-912-11	CERAMIC	.0047 $\mu$ F 20% 250V	C923	1-163-133-00	CERAMIC CHIP	470pF 5% 50V
C641	1-126-933-11	ELECT	100 $\mu$ F 20% 16V	C924	1-126-962-11	ELECT	3.3 $\mu$ F 20% 50V
C643	1-113-912-11	CERAMIC	.0047 $\mu$ F 20% 250V	C925	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C647	1-102-228-00	CERAMIC	470pF 10% 500V	C926	1-126-935-11	ELECT	470 $\mu$ F 20% 16V
C650	1-163-019-00	CERAMIC CHIP	0.0068 $\mu$ F 10% 50V	C927	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C660 $\Delta$	1-113-912-11	CERAMIC	.0047 $\mu$ F 20% 250V	C928	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V
C661	1-117-699-11	CERAMIC	0.001 $\mu$ F 20% 250V	C929	1-163-009-11	CERAMIC CHIP	0.001 $\mu$ F 10% 50V
C701	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F 10% 25V	C930	1-137-150-11	MYLAR	0.01 $\mu$ F 5% 50V
C702	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V	C931	1-163-133-00	CERAMIC CHIP	470pF 5% 50V
C703	1-136-169-00	FILM	0.22 $\mu$ F 5% 50V	C935	1-107-823-11	CERAMIC CHIP	0.47 $\mu$ F 10% 16V
C704	1-163-259-91	CERAMIC CHIP	220pF 5% 50V	C936	1-163-251-11	CERAMIC CHIP	100pF 5% 50V
C705	1-130-495-00	MYLAR	0.1 $\mu$ F 5% 50V	C937	1-107-823-11	CERAMIC CHIP	0.47 $\mu$ F 10% 16V
C706	1-163-113-00	CERAMIC CHIP	68pF 5% 50V	C938	1-126-934-11	ELECT	220 $\mu$ F 20% 16V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>CONNECTOR</b>				D607	8-719-053-19	DIODE $\mu$ F4007G23	
CN501*	1-580-798-11	CONNECTOR PIN (DY)	6P	D608	8-719-110-49	DIODE MTZJ-T-77-18	
CN502*	1-564-512-11	PLUG, CONNECTOR	9P	D609 $\Delta$	8-719-911-19	DIODE 1SS119-25TD	
CN513	1-695-915-11	TAB (CONTACT)		D610	8-719-921-40	DIODE MTZJ-T-77-4.7B	
CN600 $\Delta$	1-785-290-11	INLET, AC 3P 0(WITH NOISE FILTER)		D611	8-719-067-68	DIODE FMC-26UA	
CN601*	1-691-960-11	PIN, CONNECTOR (PC BOARD)	3P	D612	8-719-053-19	DIODE $\mu$ F4007G23	
CN602*	1-506-371-00	PIN, CONNECTOR	2P	D613	8-719-076-20	DIODE BT149G-412-OT359	
CN701*	1-764-333-11	PLUG, CONNECTOR	10P	D614	8-719-032-12	DIODE D1NS6-TA2	
CN901*	1-508-879-11	BASE POST		D615	8-719-979-58	DIODE EGP10DPKG23	
CN902*	1-764-333-11	PLUG, CONNECTOR	10P	D616	8-719-979-58	DIODE EGP10DPKG23	
CN903*	1-564-511-11	PLUG, CONNECTOR	8P	D617	8-719-947-06	DIODE RGP10JPKG23	
				D618	8-719-058-38	DIODE FMN-G12S	
<b>DIODE</b>				D619	8-719-058-38	DIODE FMN-G12S	
D401	8-719-052-90	DIODE D1NL40-TA		D620	8-719-300-76	DIODE RGP10DG23	
D402	8-719-921-40	DIODE MTZJ-T-77-4.7B		D621	8-719-911-19	DIODE 1SS119-25TD	
D403	8-719-988-61	DIODE 1SS355TE-17		D622	8-719-058-38	DIODE FMN-G12S	
D404	8-719-058-24	DIODE RB501V-40TE-17		D623	8-719-110-31	DIODE MTZJ-T-77-12B	
D501	8-719-110-31	DIODE MTZJ-T-77-12B		D701	8-719-911-19	DIODE 1SS119-25TD	
D502	8-719-981-00	DIODE D3S4M		D704	8-719-911-19	DIODE 1SS119-25TD	
D504	8-719-110-49	DIODE MTZJ-T-77-18		D901	8-719-988-61	DIODE 1SS355TE-17	
D505	8-719-941-74	DIODE ERB91-02TP1		D902	8-719-047-98	DIODE HZU5.6B2TRF	
D506	8-719-075-18	DIODE BY459X-1500S-OF4459		D903	8-719-050-84	DIODE RB441QT-77	
D507	8-719-109-85	DIODE MTZJ-T-77-5.1B		D904	8-719-047-98	DIODE HZU5.6B2TRF	
D509	8-719-110-17	DIODE MTZJ-T-77-10B		D905	8-719-911-19	DIODE 1SS119-25TD	
D510	8-719-018-82	DIODE ERA34-10TP1		D906	8-719-988-61	DIODE 1SS355TE-17	
D511	8-719-109-89	DIODE MTZJ-T-77-5.6B		D907	8-719-988-61	DIODE 1SS355TE-17	
D512	8-719-911-19	DIODE 1SS119-25TD		D908	8-719-988-61	DIODE 1SS355TE-17	
D513	8-719-052-90	DIODE D1NL40-TA		D909	8-719-047-98	DIODE HZU5.6B2TRF	
D514	8-719-970-83	DIODE HSS82-TJ		D910	8-719-047-98	DIODE HZU5.6B2TRF	
D515 $\Delta$	8-719-018-82	DIODE ERA34-10TP1		D911	8-719-988-61	DIODE 1SS355TE-17	
D516	8-719-052-86	DIODE D2L40-TA		D912	8-719-079-71	DIODE SML16751WNS	
D517 $\Delta$	8-759-157-40	DIODE HZT33-02TE		D913	8-719-988-61	DIODE 1SS355TE-17	
D518	8-719-110-17	DIODE MTZJ-T-77-10B		D914	8-719-988-61	DIODE 1SS355TE-17	
D519	8-719-911-19	DIODE 1SS119-25TD		D915	8-719-988-61	DIODE 1SS355TE-17	
D520	8-719-018-82	DIODE ERA34-10TP1		D916	8-719-988-61	DIODE 1SS355TE-17	
D521	8-719-018-82	DIODE ERA34-10TP1		D917	8-719-988-61	DIODE 1SS355TE-17	
D522	8-719-911-19	DIODE 1SS119-25TD		D918	8-719-047-98	DIODE HZU5.6B2TRF	
D523	8-719-911-19	DIODE 1SS119-25TD		D919	8-719-988-61	DIODE 1SS355TE-17	
D524	8-719-051-85	DIODE HSS83TD		D920	8-719-058-24	DIODE RB501V-40TE-17	
D525	8-719-051-85	DIODE HSS83TD		D921	8-719-988-61	DIODE 1SS355TE-17	
D527	8-719-109-85	DIODE MTZJ-T-77-5.1B		D924	8-719-988-61	DIODE 1SS355TE-17	
D601 $\Delta$	8-719-510-53	DIODE D4SB60L-F		D925	8-719-988-61	DIODE 1SS355TE-17	
D602 $\Delta$	8-719-911-19	DIODE 1SS119-25TD		D926	8-719-988-61	DIODE 1SS355TE-17	
D603	8-719-911-19	DIODE 1SS119-25TD		D927	8-719-988-61	DIODE 1SS355TE-17	
D605	8-719-110-31	DIODE MTZJ-T-77-12B		D928	8-719-047-98	DIODE HZU5.6B2TRF	
D606 $\Delta$	8-719-053-19	DIODE $\mu$ F4007G23		D929	8-719-047-98	DIODE HZU5.6B2TRF	
				D930	8-719-047-98	DIODE HZU5.6B2TRF	
				D931	8-719-109-89	DIODE MTZJ-T-77-5.6B	
				D932	8-719-109-89	DIODE MTZJ-T-77-5.6B	



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D933	8-719-109-89	DIODE MTZJ-T-77-5.6B		JR012	1-216-295-11	SHORT	
D934	8-719-047-98	DIODE HZU5.6B2TRF		JR013	1-216-295-11	SHORT	
D935	8-719-109-85	DIODE MTZJ-T-77-5.1B		JR014	1-216-296-91	SHORT	
D936	8-719-109-89	DIODE MTZJ-T-77-5.6B		JR015	1-216-295-11	SHORT	
D937	8-719-109-89	DIODE MTZJ-T-77-5.6B		JR016	1-216-295-11	SHORT	
<b>FUSE</b>				JR017	1-216-295-11	SHORT	
F601 $\Delta$	1-576-231-11	FUSE (H.B.C.)	4A/250V	JR018	1-216-295-11	SHORT	
<b>FERRITE BEAD</b>				JR019	1-216-296-91	SHORT	
FB502	1-410-396-41	FERRITE	0.45 $\mu$ H	JR020	1-216-296-91	SHORT	
FB504	1-412-911-11	FERRITE	0 $\mu$ H	JR021	1-216-296-91	SHORT	
FB506	1-412-911-11	FERRITE	0 $\mu$ H	JR022	1-216-295-11	SHORT	
FB904	1-543-961-22	FERRITE	0 $\mu$ H	JR023	1-216-295-11	SHORT	
<b>IC</b>				JR024	1-216-296-91	SHORT	
IC401	8-759-339-59	IC TDA8177		JR025	1-216-296-91	SHORT	
IC501 $\Delta$	8-759-570-29	IC UPC6757CS		JR027	1-216-296-91	SHORT	
IC502	8-759-803-42	IC LA6500-FA		JR028	1-216-296-91	SHORT	
IC503	8-759-803-42	IC LA6500-FA		JR029	1-216-295-11	SHORT	
IC601 $\Delta$	8-759-594-75	IC TEA1504/N2		JR030	1-216-295-11	SHORT	
IC602	8-759-592-79	IC BA00AST-V5		JR032	1-216-296-91	SHORT	
IC603 $\Delta$	8-749-016-35	IC TLP621D4-Y-LF2T		JR033	1-216-296-91	SHORT	
IC604	8-759-586-17	IC TL1431CZ-AP		JR034	1-216-295-11	SHORT	
IC605	8-759-637-83	IC PQ12RD8S		JR038	1-216-296-91	SHORT	
IC607 $\Delta$	8-759-450-47	IC BA05T		JR604	1-216-295-11	SHORT	
IC608	8-759-231-53	IC L7805CV		JR606	1-216-295-11	SHORT	
IC701	8-759-595-52	IC CXA8070AP		<b>COIL</b>			
IC702	8-749-015-00	IC STK391-110		L501	1-406-663-21	INDUCTOR	47 $\mu$ H
IC703	8-759-822-38	IC LA6510		L502	1-406-663-21	INDUCTOR	47 $\mu$ H
IC901 $\Delta$	8-759-597-05	IC CXD9529S		L503	1-411-594-41	INDUCTOR	5mH
IC902	8-759-594-40	IC CXA8071CP		L505	1-412-552-11	INDUCTOR	2.2mH
IC904	8-759-352-91	IC PST9143NL		L506	1-412-548-31	INDUCTOR	820 $\mu$ H
IC905	8-759-675-64	IC M24C08-MN6T(A)		L507	1-414-856-11	INDUCTOR	10 $\mu$ H
<b>CHIP CONDUCTOR</b>				L508	1-419-198-21	COIL, HORIZONTAL LINEARITY	
JR001	1-216-296-91	SHORT		L509	1-419-198-21	COIL, HORIZONTAL LINEARITY	
JR003	1-216-295-11	SHORT		L510	1-416-367-11	COIL, HORIZONTAL CENTER	
JR004	1-216-295-11	SHORT		L511	1-414-187-11	INDUCTOR	47 $\mu$ H
JR006	1-216-295-11	SHORT		L513	1-414-856-11	INDUCTOR	10 $\mu$ H
JR007	1-216-295-11	SHORT		L602	1-412-529-11	INDUCTOR	22 $\mu$ H
JR008	1-216-296-91	SHORT		L603	1-412-537-31	INDUCTOR	100 $\mu$ H
JR009	1-216-295-11	SHORT		L604	1-406-665-11	INDUCTOR	100 $\mu$ H
JR010	1-216-296-91	SHORT		L606	1-406-665-11	INDUCTOR	100 $\mu$ H
JR011	1-216-296-91	SHORT		<b>FILTER</b>			
				LF602 $\Delta$	1-429-180-11	TRANSFORMER, LINE FILTER	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>TRANSISTOR</b>				R506	1-215-481-00	METAL	330K 1% 1/4W
Q501	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR		R507	1-215-431-00	METAL	2.7K 1% 1/4W
Q502	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR		R508	1-247-807-31	CARBON	100 5% 1/4W
Q503	8-729-035-54	TRANSISTOR 2SJ449(1)		R509	1-249-433-11	CARBON	22K 5% 1/4W
Q504	8-729-031-89	TRANSISTOR 2SC3941A-QR(TA)		R510	1-215-437-00	METAL	4.7K 1% 1/4W
Q505	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA		R511	1-249-381-11	CARBON	1 5% 1/4W
Q506	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA		R512	1-249-389-11	CARBON	4.7 5% 1/4W
Q507	8-729-049-17	TRANSISTOR 2SC5302-SONY-CC		R513	1-215-888-00	METAL OXIDE	220 5% 2W
Q508	8-729-119-78	TRANSISTOR 2SC3311A-RTA		R514	1-216-081-00	RES-CHIP	22K 5% 1/10W
				R515	1-249-417-11	CARBON	1K 5% 1/4W
Q510	8-729-046-60	TRANSISTOR STP4NB80FP(025Y)		R516	1-214-844-81	METAL	150 1% 1/2W
Q511	8-729-042-34	TRANSISTOR IRFU110		R517	1-216-393-00	METAL OXIDE	2.2 5% 3W
Q512	8-729-047-72	TRANSISTOR 2SK3332		R518	1-216-393-00	METAL OXIDE	2.2 5% 3W
Q513	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119		R519	1-215-463-00	METAL	56K 1% 1/4W
Q514	8-729-047-72	TRANSISTOR 2SK3332		R520	1-249-397-11	CARBON	22 5% 1/4W
Q515	8-729-047-72	TRANSISTOR 2SK3332		R521	1-249-417-11	CARBON	1K 5% 1/4W
Q516	8-729-047-72	TRANSISTOR 2SK3332		R522	1-249-401-11	CARBON	47 5% 1/4W
Q518	8-729-140-50	TRANSISTOR 2SC3209LK-TP		R523	1-215-463-00	METAL	56K 1% 1/4W
Q519	8-729-029-68	TRANSISTOR DTC114TSA-TP		R524	1-215-463-00	METAL	56K 1% 1/4W
Q520	8-729-035-54	TRANSISTOR 2SJ449(1)		R525	1-249-417-11	CARBON	1K 5% 1/4W
Q521	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA		R527	1-249-429-11	CARBON	10K 5% 1/4W
Q522	8-729-027-23	TRANSISTOR DTA114EKA-T146		R528	1-216-081-00	RES-CHIP	22K 5% 1/10W
Q524	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR		R529	1-249-429-11	CARBON	10K 5% 1/4W
Q525	8-729-119-78	TRANSISTOR 2SC3311A-RTA		R530	1-216-474-11	METAL OXIDE	82 5% 3W
Q601	8-729-029-92	TRANSISTOR DTC143ESA-TP		R531	1-216-474-11	METAL OXIDE	82 5% 3W
Q602 $\triangle$	8-729-048-61	TRANSISTOR 2SK2843LBS2SONY		R532	1-249-385-11	CARBON	2.2 5% 1/4W
Q603	8-729-900-53	TRANSISTOR DTC114EKA-T146		R533	1-249-417-11	CARBON	1K 5% 1/4W
Q604	8-729-119-78	TRANSISTOR 2SC3311A-RTA		R534	1-249-405-11	CARBON	100 5% 1/4W
Q605	8-729-900-53	TRANSISTOR DTC114EKA-T146		R535	1-215-463-00	METAL	56K 1% 1/4W
Q903	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR		R536	1-249-417-11	CARBON	1K 5% 1/4W
<b>RESISTOR</b>				R537	1-215-463-00	METAL	56K 1% 1/4W
R401	1-249-381-11	CARBON	1 5% 1/4W	R538	1-215-905-11	METAL OXIDE	10 5% 3W
R402	1-215-866-11	METAL OXIDE	330 5% 1W	R539	1-215-905-11	METAL OXIDE	10 5% 3W
R403	1-214-661-21	METAL	1.5 1% 1/4W	R540 $\triangle$	1-215-476-00	METAL	200K 1% 1/4W
R404	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W	R541 $\triangle$	1-215-421-00	METAL	1K 1% 1/4W
R405	1-214-661-21	METAL	1.5 1% 1/4W	R542 $\triangle$	1-215-421-00	METAL	1K 1% 1/4W
R406	1-216-677-11	METAL CHIP	12K 0.50% 1/10W	R543 $\triangle$	1-249-389-11	CARBON	4.7 5% 1/4W
R407	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R544 $\triangle$	1-247-903-00	CARBON	1M 5% 1/4W
R408	1-216-073-00	RES-CHIP	10K 5% 1/10W	R545	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R409	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W	R546	1-215-457-00	METAL	33K 1% 1/4W
R410	1-216-677-11	METAL CHIP	12K 0.50% 1/10W	R547 $\triangle$	1-215-477-00	METAL	220K 1% 1/4W
R500	1-249-377-11	CARBON	0.47 5% 1/4W	R548	1-215-423-00	METAL	1.2K 1% 1/4W
R501	1-216-025-11	RES-CHIP	100 5% 1/10W	R549 $\triangle$	1-215-464-00	METAL	62K 1% 1/4W
R502	1-218-758-11	METAL CHIP	180K 0.50% 1/10W	R550	1-215-423-00	METAL	1.2K 1% 1/4W
R503	1-216-675-91	METAL CHIP	10K 0.50% 1/10W	R551	1-216-687-11	METAL CHIP	33K 0.50% 1/10W
R504	1-249-377-11	CARBON	0.47 5% 1/4W	R552 $\triangle$	1-215-463-00	METAL	56K 1% 1/4W
R505	1-216-073-00	RES-CHIP	10K 5% 1/10W	R553	1-216-698-11	METAL CHIP	91K 0.50% 1/10W
				R554	1-218-756-11	METAL CHIP	150K 0.50% 1/10W



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R556	1-216-691-11	METAL CHIP	47K 0.50% 1/10W	R609	1-216-665-11	METAL CHIP	3.9K 0.50% 1/10W
R557	1-216-079-00	RES-CHIP	18K 5% 1/10W	R610	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R558	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W	R611	1-216-009-91	RES-CHIP	22 5% 1/10W
R559	1-216-661-11	METAL CHIP	2.7K 0.50% 1/10W	R612	1-247-791-91	CARBON	22 5% 1/4W
R560	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	R613 $\Delta$	1-219-513-11	CARBON	4.7M 5% 1/2W
R561	1-216-474-11	METAL OXIDE	82 5% 3W	R614	1-216-345-11	METAL OXIDE	0.47 5% 1W
R562	1-215-451-00	METAL	18K 1% 1/4W	R615	1-216-117-00	RES-CHIP	680K 5% 1/10W
R563	1-249-383-11	CARBON	1.5 5% 1/4W	R616	1-216-121-11	RES-CHIP	1M 5% 1/10W
R564 $\Delta$	1-216-089-11	RES-CHIP	47K 5% 1/10W	R617	1-216-025-11	RES-CHIP	100 5% 1/10W
R565	1-215-481-00	METAL	330K 1% 1/4W	R618	1-216-635-11	METAL CHIP	220 0.50% 1/10W
R566	1-215-859-00	METAL OXIDE	22 5% 1W	R619	1-215-893-11	METAL OXIDE	1.5K 5% 2W
R567 $\Delta$	1-216-073-00	RES-CHIP	10K 5% 1/10W	R620	1-216-687-11	METAL CHIP	33K 0.50% 1/10W
R568 $\Delta$	1-249-437-11	CARBON	47K 5% 1/4W	R621	1-216-098-00	RES-CHIP	110K 5% 1/10W
R569	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R622	1-247-791-91	CARBON	22 5% 1/4W
R570	1-249-417-11	CARBON	1K 5% 1/4W	R623	1-216-615-91	METAL CHIP	33 0.50% 1/10W
R571	1-215-926-00	METAL OXIDE	33K 5% 3W	R624	1-216-611-11	METAL CHIP	22 0.50% 1/10W
R572	1-249-437-11	CARBON	47K 5% 1/4W	R625	1-260-332-51	CARBON	2.2K 5% 1/2W
R573	1-247-887-00	CARBON	220K 5% 1/4W	R626	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R574	1-249-421-11	CARBON	2.2K 5% 1/4W	R627	1-260-288-11	CARBON	0.47 5% 1/2W
R575	1-260-314-11	CARBON	68 5% 1/2W	R628	1-216-674-11	METAL CHIP	9.1K 0.50% 1/10W
R576	1-249-437-11	CARBON	47K 5% 1/4W	R629	1-249-441-11	CARBON	100K 5% 1/4W
R577	1-215-908-00	METAL OXIDE	33 5% 3W	R633	1-249-429-11	CARBON	10K 5% 1/4W
R578	1-216-448-11	METAL OXIDE	39 5% 2W	R635	1-215-925-11	METAL OXIDE	22K 5% 3W
R579	1-247-883-00	CARBON	150K 5% 1/4W	R636	1-260-119-11	CARBON	47K 5% 1/2W
R580	1-216-077-91	RES-CHIP	15K 5% 1/10W	R637	1-215-902-11	METAL OXIDE	47K 5% 2W
R581	1-249-429-11	CARBON	10K 5% 1/4W	R640	1-249-381-11	CARBON	1 5% 1/4W
R582	1-249-402-11	CARBON	56 5% 1/4W	R642	1-216-641-11	METAL CHIP	390 0.50% 1/10W
R583	1-216-073-00	RES-CHIP	10K 5% 1/10W	R643	1-215-467-00	METAL	82K 1% 1/4W
R584	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	R647	1-216-073-00	RES-CHIP	10K 5% 1/10W
R585	1-249-417-11	CARBON	1K 5% 1/4W	R648	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W
R586	1-249-421-11	CARBON	2.2K 5% 1/4W	R649	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
R587	1-249-417-11	CARBON	1K 5% 1/4W	R650	1-215-471-00	METAL	120K 1% 1/4W
R589	1-249-425-11	CARBON	4.7K 5% 1/4W	R654	1-216-344-00	METAL OXIDE	0.39 5% 1W
R590	1-215-453-00	METAL	22K 1% 1/4W	R655	1-247-807-31	CARBON	100 5% 1/4W
R591	1-214-844-81	METAL	150 1% 1/2W	R656	1-215-893-11	METAL OXIDE	1.5K 5% 2W
R592	1-214-844-81	METAL	150 1% 1/2W	R660	1-260-119-11	CARBON	47K 5% 1/2W
R594	1-216-033-00	RES-CHIP	220 5% 1/10W	R661	1-215-902-11	METAL OXIDE	47K 5% 2W
R595 $\Delta$	1-215-477-00	METAL	220K 1% 1/4W	R663	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
R596	1-215-423-00	METAL	1.2K 1% 1/4W	R665	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
R597	1-259-880-11	CARBON	2.2M 5% 1/4W	R703	1-249-410-11	CARBON	270 5% 1/4W
R599	1-249-417-11	CARBON	1K 5% 1/4W	R704	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W
R600	1-205-998-11	CEMENTED	1 5% 10W	R705	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R602	1-219-513-11	CARBON	4.7M 5% 1/2W	R706	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R603	1-249-403-11	CARBON	68 5% 1/4W	R707	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R604 $\Delta$	1-220-827-91	RESISTOR	560K 5% 1/2W	R708	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R605	1-202-933-61	FUSIBLE	0.1 10% 1/2W	R709	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R606	1-218-768-11	METAL CHIP	470K 0.50% 1/10W	R710	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R607	1-216-081-00	RES-CHIP	22K 5% 1/10W	R711	1-216-346-00	METAL OXIDE	0.56 5% 1W
R608	1-215-473-00	METAL	150K 1% 1/4W				





**Note:**

The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

**Note:**

Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<b><u>TRANSFORMER</u></b>							
T501 $\Delta$	1-453-311-11	FBT ASSY, NX-4404//X4L4					
T503	1-433-979-11	TRANSFORMER, FERRITE (DFT)					
T504	1-433-978-11	TRANSFORMER, HORIZONTAL DRIVE					
T505	1-431-413-11	TRANSFORMER, FERRITE (HST)					
T601 $\Delta$	1-433-847-14	TRANSFORMER, CONVERTER (SRT)					
<b><u>THERMISTOR</u></b>							
TH501	1-807-796-11	THERMISTOR					
TH600 $\Delta$	1-809-827-11	THERMISTOR, NTC					
TH601	1-803-540-11	THERMISTOR					
<b><u>VARISTOR</u></b>							
VA601 $\Delta$	1-801-073-31	VARISTOR TNR14V471K660					
VA603	1-137-479-11	MYLAR 1 $\mu$ F 10% 400V					
<b><u>CRYSTAL</u></b>							
X901	1-767-641-11	VIBRATOR, CRYSTAL					
X902	1-767-933-11	OSCILLATOR, CERAMIC					

